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## Course Information

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**Course Title:** *Business Valuation* #365622

**Number of continuing education credit hours recommended for this course:**

In accordance with the standards of the CFP Board, the IDFA, and the National Registry of CPE Sponsors CPE credits have been granted based on a 50-minute hour.

**CFP®:** 2 (CFP Board Course ID # 257127)

**CDFA®:** 3 (Registered with the Institute for Divorce Financial Analysts)

**CPA:** 3 (All states)

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Ohio State Board of Accountancy: M0021

Texas State Board of Accountancy: 009349

### Course Description

Maximizing value from the purchase of a business requires a detailed understanding of valuation methods. The *Business Valuation* course provides insights into the circumstances under which different valuation methods should be used, and discusses how to sort out those situations in which a range of valuations are indicated. The course goes on to describe how to value intangible assets, a number of valuation adjustment factors, valuation mistakes, and similar topics. In short, the course is a valuable reference for anyone seeking a better understanding of how much a business is worth.

### Course Content

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Author: Steven M. Bragg, CPA.

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### Subject Codes/Field of Study

NASBA (CPA): Finance; CFP Board: Investment Planning; IDFA: Financial Planning

### Course Level, Prerequisites, and Advance Preparation Requirements

Program Level: CFP Board, IDFA: Intermediate.

NASBA (CPA): Overview;

This program is appropriate for professionals at all organizational levels.

Prerequisites: None

Advance Preparation: None

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## Learning Objectives:

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- Identify the situations in which a business valuation may be needed.
- Specify the presence of going concern indicators.
- Recognize the calculation methods used for each of the valuation methodologies.
- Recall how the cost of capital is derived, including the proper derivation of beta.
- Specify how scenario analysis can be used to refine the discounted cash flows model.
- Identify the circumstances under which premiums and discounts are applied to a valuation.
- Recognize the different types of intangible assets.
- Recall the different methods available for assigning valuations to intangible assets.

## About the Author

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**Steven Bragg, CPA**, has been the chief financial officer or controller of four companies, as well as a consulting manager at Ernst & Young. He received a master's degree in finance from Bentley College, an MBA from Babson College, and a Bachelor's degree in Economics from the University of Maine. He has been a two-time president of the Colorado Mountain Club, and is an avid alpine skier, mountain biker, and certified master diver. Mr. Bragg resides in Centennial, Colorado. He has written more than 250 books and courses, including *New Controller Guidebook*, *GAAP Guidebook*, and *Payroll Management*.

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# Chapter 1

## Business Valuation

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### Learning Objectives

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- Identify the situations in which a business valuation may be needed.
- Specify the presence of going concern indicators.
- Recognize the calculation methods used for each of the valuation methodologies.
- Recall how the cost of capital is derived, including the proper derivation of beta.
- Specify how scenario analysis can be used to refine the discounted cash flows model.
- Identify the circumstances under which premiums and discounts are applied to a valuation.

### Introduction

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Why do we need to assign a valuation to a business? An owner may be faced with a number of situations in which a business valuation is needed, or is at least useful information. Consider the following situations:

- *Buyout offer.* An offer has been received from a potential acquirer to buy the business, and the owner needs to evaluate whether it is a fair offer.
- *Possible acquisition.* A business owner is interested in buying an entity currently owned by someone else, and wants to ascertain whether the seller's proposed price is reasonable.
- *ESOP purchase.* An employee stock ownership plan (ESOP) may be set up to buy the shares of the owner. If so, a valuation is needed to set up a purchase transaction between the owner and the ESOP.
- *Funding.* If a business requires new equity funding, prospective investors will want to know the value being assigned to the company as part of the equity pricing.
- *Financial trouble.* If a business is financially troubled, the owners and creditors may want to gain a better understanding of its value, to judge whether it is worth saving with the infusion of more funds, or whether it should be shut down.
- *Divorce.* The married owners of a business decide to divorce, with one person demanding a fair share of the value of the business.
- *Minority shareholder buyout.* The majority owner of a business wants to buy out a minority owner, and needs a valuation in order to determine the amount of the buyout offer.
- *Estate taxes.* The founder of a business wants to obtain a sufficient amount of life insurance to pay for any estate taxes that may be imposed upon his or her death, which requires a valuation of the business.
- *Buy/sell agreement.* In a partnership, there should be a buy/sell agreement between the partners, which stipulates how the partners can buy each other out in case someone wants to leave. Part of this arrangement includes a valuation of the business, of which each partner owns a share.

The most likely reason for a valuation is to buy or sell a business. That being the case, the bulk of this course is written from the perspective of valuation issues that arise during the purchase or sale of a business.

There are many ways to value a business, which can yield widely varying results, depending upon the basis of each valuation method. Some methods assume a valuation based on the assumption that a business will be sold off at bankruptcy prices, while other methods focus on the inherent value of intellectual property and the strength of a company's brands, which can yield much higher valuations. There are many other valuation methods lying between these two extremes.

## Business Valuation

We need all of these methods, because no single valuation method applies to all businesses. For example, a rapidly-growing business with excellent market share may produce little cash flow, and so cannot be valued based on its discounted cash flows. Alternatively, a company may have poured all of its funds into the development of intellectual property, but has no market share at all. Only through the application of multiple valuation methods can we discern what the valuation of a business may be.

In this course, we cover how to arrive at the valuation of a business. We describe not only the calculation methodology, but also the assumptions underlying each one, and the situations to which they might be applied. They are presented beginning with those likely to yield the lowest valuations, and progress through other methods that usually result in higher valuations. The methods are summarized near the end of this chapter, in the Valuation Floor and Ceiling section.

**Related Podcast Episode:** Episode 75 of the Accounting Best Practices Podcast discusses acquisition valuation. It is available at: <https://www.bhfe.com/podcasts.cfm>

### The Difference between Value and Price

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In this course, the focus is on the valuation of a business. Valuation is not necessarily the same as the price received or paid for a business; this is the monetary amount that the buyer pays to the seller in exchange for ownership of a business. Value is what the buyer of a business receives. The value could be much higher than the price under any of the following circumstances:

- The buyer has a distribution network through which it can sell the acquiree's products and services, thereby enhancing total profits.
- The buyer is paying for the acquiree at the bottom of an economic cycle when prices are low, and intends to flip the business to a buyer at the top of the next cycle, when prices are higher.
- The seller is in financial difficulty and must sell at a reduced price, so the buyer obtains a bargain purchase.
- The buyer has expertise in cost cutting, creating lean operations, and so forth that can generously boost the profits of the acquiree.

In all of these cases, the buyer has a strategy for obtaining a value that is at least as high as the price it pays, and preferably higher. It is useful for the seller to be aware of the amount of value that the buyer perceives to be available to it, so that the seller does not demand a price that leaves no room for the buyer to obtain any extra value.

### Major Valuation Approaches

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In most of the following sections, we describe a number of valuation methods. Despite the large number of methods, there are really only three major approaches to valuation, which are as follows:

- *Asset approach.* The fair market values of all assets are determined and the fair market values of all liabilities are subtracted to arrive at a valuation. This approach is conservative, since it does not factor in the additional value that can be derived from such intangibles as product branding and company reputation.

**Note:** Fair market value is the price at which two parties are willing to exchange an asset or liability, when both parties are well informed about the condition of the item, there is no undue pressure to buy or sell the item, and there is no time pressure to complete the deal.

- *Income approach.* The cash flows expected to be generated by a business for a certain number of future periods are estimated, and then converted to their present value with a discount rate. This

## Business Valuation

method can provide a higher valuation than the asset approach, but only if there is a reasonable expectation for future profits.

- *Market approach.* The revenues, income, or cash flows of a business are compared to those of other businesses that have sold recently, to derive a valuation multiple similar to those achieved in the marketplace. It can be difficult to carry over a market-based valuation, if the characteristics of the business are different from those of the other entities that have been sold.

All of the valuation methods noted later in this course are associated with one or more of these approaches.

### The Going Concern Concept

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The result of any valuation approach will vary, depending on the ability of a business to continue as a going concern. When an organization is considered to be a going concern, this means that it is expected to continue in operation for the foreseeable future. The following are all indicators that a business may no longer be a going concern:

- Negative trends in operating results, such as a series of losses
- Loan defaults by the company
- Denial of trade credit to the company by its suppliers
- Uneconomical long-term commitments to which the company is subjected
- Legal proceedings against the company

If a business is a going concern, it has the potential to generate a profit, which allows an income approach to be used to develop a valuation. Having an extra avenue for the development of a valuation presents the possibility that a higher valuation can be established. Here are other reasons why a going concern is more valuable:

- There is customer brand recognition that is being actively supported by the business through its marketing efforts
- There is a list of active customers that can be contacted regarding additional sales
- New products are still being developed
- Existing products are still being supported with customer service, warranties, and field service operations
- There is a core group of employees that has a detailed knowledge of how the business operates

Thus, an operating business has the potential to have a substantially higher valuation than one that has been shuttered. A shut-down operation is more likely to be valued at its liquidation value, which is addressed in the Liquidation Value section.

### Liquidation Value

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Liquidation value is the amount of funds that would be collected if all assets and liabilities of an entity were to be sold off or settled. Generally, liquidation value varies depending upon the time allowed to sell assets. If there is a very short-term “fire sale,” then the assumed amount realized from the sale would be lower than if a business were permitted to liquidate over a longer period of time (which is called an *orderly liquidation*). In a fire sale situation, there are fewer bidders, and they likely know that the seller is desperate and so will accept lower bids. In an orderly liquidation, there is sufficient time to involve more bidders, who are encouraged to compete against each other in offering better purchase prices for assets and liabilities.

The liquidation value concept is based on the assumption that a business will terminate, for one that continues in business has additional earning power from its intellectual property, products, branding, and



## Business Valuation

so forth. Thus, liquidation value sets the lowest possible valuation for a business. The concept is useful for an acquirer to address even in cases where it intends to pay a great deal more for a target company. The reason is that the difference between the liquidation value and the amount actually paid is the amount for which the acquirer is at risk, in case there are problems with the target company that require it to be liquidated.

The owners of a business would be foolish to sell at the liquidation price, since they could just as easily liquidate the business themselves as sell it to someone else and have *them* liquidate it. Nonetheless, if a business is suffering from any number of factors related to its operations or the business environment, it is possible that an astute acquirer might actually complete a purchase at a valuation relatively close to the liquidation value of the target.

### Book Value

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Book value is the amount that shareholders would receive if a company's assets, liabilities, and preferred stock were sold or paid off at exactly the amounts at which they are recorded in the company's accounting records. It is highly unlikely that this would ever actually take place, because the market value at which these items would be sold or paid off might vary by substantial amounts from their recorded values. There could be particularly large disparities between the recorded and market values of items in the following areas:

- *Inventory.* If a company uses the last in, first out (LIFO) method of inventory costing, this could mean that some portions of the inventory are assigned a cost that could be a number of years old. Also, if a company is located in an industry where inventory obsolescence occurs quickly, then the recorded cost of inventory may be much higher than the amount at which it could actually be sold.
- *Fixed assets.* Fixed assets are recorded at their purchase costs. That cost is reduced over the useful life of the assets with depreciation. However, the depreciation charge does not necessarily relate to the decline in the market value of an asset over time. Instead, there can be a significant difference between the net book value of a fixed asset and its sale price.
- *Intangible assets.* Intangible assets are recorded at their purchase costs, which are then reduced over the useful life of the assets with amortization. There can be very large differences between the market value of these assets and their net book values. For example, a patent may have an increasing market value that greatly exceeds its recorded cost.
- *Contingent liabilities.* There may be any number of contingent liabilities that are not recorded in the accounting records of a business at all, and yet represent significant liabilities. For example, there may be a potential for adverse judgments in lawsuits, or as a guarantor for a debt.

Book value is an imprecise measure of the value of a business, since it simply reflects a variety of accounting standards used to record accounting transactions. It does not necessarily reflect the value of a business at all. In general, it may be used as a baseline around which more valid valuation results may fall.

Book value may also be used as the denominator in the calculation of sale price to book value for the sales of similar businesses. Thus, if a mix of other companies in the same industry sold for a multiple of five times book value, then one might apply that same relationship to another prospective sale when determining a price for it.

## Business Valuation

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### EXAMPLE

High Noon Armaments wants to determine the sales price to book value ratio for recent sales in the armaments industry, to see what types of multiples it should apply when formulating offer prices for other businesses. It compiles the following information about five other sale transactions that were completed within the past 12 months:

<u>Transaction</u>	<u>Sale Price</u>	<u>Book Value</u>	<u>Sale-to-Book-Value Ratio</u>
A	\$10,000,000	\$3,800,000	2.6x
B	27,500,000	8,900,000	3.1x
C	42,650,000	10,900,000	3.9x
D	16,250,000	5,800,000	2.8x
E	<u>6,500,000</u>	<u>4,800,000</u>	<u>1.4x</u>
Totals	<u>\$102,900,000</u>	<u>\$34,200,000</u>	<u>3.0x</u>

Upon further examination of the underlying information, High Noon's CFO finds that Transaction E involved the sale of a business that was in severe financial difficulties, so he throws out the outlier ratio that resulted from that transaction. The remaining transactions yield an average sale-to-book-value ratio of 3.3x.

---

There are a number of problems with using the sale price to book value ratio as the basis for a valuation. They are:

- *Intellectual property.* Another business may have garnered an unusually high price in comparison to its book value, because it had unusually excellent intellectual property that may not have even been recorded as an asset in its accounting records.
- *Early-sale effect.* If there is a surge in acquisitions within an industry, typically the highest-quality firms are snapped up first. This means that the highest ratios of sale price to book value appear early in an acquisition cycle; the ratio should decline later in the cycle, as lower-quality firms are purchased.
- *Asset efficiency.* Some companies are much more efficient in the use of their assets than others, leading to significant disparities in the ratio.

In short, book value is of dubious use in deriving the valuation of a target company. It should certainly not be used as the sole basis for deriving a valuation.

### Real Estate Value

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If a company has substantial real estate holdings, they may form the primary basis for the valuation of the business. This approach only works if nearly all of the assets of a business are various forms of real estate. Since most businesses lease real estate, rather than owning it, this method can only be used in a small number of situations.

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### EXAMPLE

High Noon Armaments is interested in acquiring High Caliber, a chain of gun shops. Upon further investigation, High Noon finds that the shops are barely profitable, but that High Caliber owns both the land on

## Business Valuation

which its stores are situated and the stores themselves. The CFO of High Noon elects to compile a valuation based on the underlying real estate, rather than the cash flow fundamentals of the business.

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If the acquirer has no experience in dealing with real estate, and plans to sell off the real estate, then it may apply a discount to the real estate values that it derives. However, since the real estate valuation is being used as the primary source of information for the valuation, and the acquirer expects to sell the real estate, this brings up the issue of why the acquirer is making an offer at all.

From the perspective of a seller that wants to be sold, it may make more sense to gradually sell off the real estate in such a manner as to maximize prices, and use the funds to either buy back shares or issue a large cash dividend to shareholders. This approach shifts all of the cash directly to the shareholders, without worrying about any discount that might be applied by a prospective acquirer. Company management can then pursue the sale of the remainder of the business to realize any residual cash, which also goes to the shareholders.

### Asset Accumulation Method

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Under the book value approach, it is assumed that many assets are valued at their original costs, net of any subsequent depreciation, amortization, and write downs. Some assets and liabilities are regularly updated to match their fair market values (such as marketable securities). Nonetheless, the bulk of all items found on the balance sheet are recorded at their book values. It is entirely possible that the fair market values of these items diverge from their book values, and possibly by quite a large amount. If this is the case, it can make sense to instead use the asset accumulation method. Under this approach, all assets and liabilities are adjusted to their fair market values. Additional assets and liabilities that may not have appeared on the balance sheet at all (such as intangible assets and contingent liabilities) are added. The aggregate amount of all liabilities is then subtracted from the total for all assets to arrive at the valuation of the business.

This can be an expensive and time-consuming way to arrive at a valuation, since appraisers will likely be needed to derive valuations for individual assets and liabilities. The range of this analysis can be quite extensive, since it should include the following items:

- Current assets, such as receivables and inventory
- Tangible personal property, such as vehicles, furniture, and equipment
- Real estate, such as land and buildings
- Intangible real property, such as water rights and easements
- Intangible personal property, such as trademarks and copyrights
- Current liabilities, such as payables and wages payable
- Long-term liabilities, such as bonds and mortgages
- Contingent liabilities, such as pending litigation and loan guarantees
- Special obligations, such as unfunded pension plans

A particularly valuable aspect of the asset accumulation method is that it precisely defines the assets that are contributing to the valuation of a business. This can be helpful when a business owner only plans to sell off portions of an organization – just those assets and liabilities being sold off can be valued. The reverse can also be the case – assets can be withheld from a sale transaction if the buyer is only willing to pay a price that is lower than indicated by the asset accumulation method.

### Enterprise Value

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What would be the value of a company if an acquirer were to buy all of its shares on the open market, pay off any existing debt, and keep any cash remaining on the company's balance sheet? This is called the enterprise value of a business, for which the calculation is noted in the following table.

## Business Valuation

### Enterprise Value Calculation

+	Market value of all shares outstanding
+	Total debt outstanding
-	<u>Cash</u>
=	Enterprise value

Enterprise value is only a theoretical form of valuation, because it does not factor in the effect on the market price of a target company's stock once the takeover bid is announced. Also, it does not include the impact of a control premium on the price per share (see the Control Premium section). In addition, the current market price may not be indicative of the real value of the business if the stock is thinly traded, since a few trades can substantially alter the market price. Further, the removal of cash from the target company does not indicate the need for that cash in order to continue operating the business. Nonetheless, enterprise value is of some use in determining the "raw" valuation prior to estimating the control premium and other factors that typically boost the valuation of a business.

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### EXAMPLE

High Noon Armaments is preparing the valuation of a publicly-held target company, and the CFO wants to know the amount of its enterprise value. The target has one million shares, and today's market price is \$12.50 per share. According to its most recent quarterly Form 10-Q filing with the Securities and Exchange Commission, the target has \$2.4 million of outstanding debt, and \$200,000 of cash on hand. Based on this information, its enterprise value is:

+ Market value (1,000,000 shares × \$12.50/share)	\$12,500,000
+ Debt	2,400,000
- Cash	<u>-200,000</u>
= Enterprise value	<u>\$14,700,000</u>

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### Multiples Analysis

It is quite easy to collect the financial information and stock prices of publicly-held companies, and then convert this information into valuation multiples that are based on company performance. These multiples can then be used to derive an approximate valuation for a specific company. This approach should only be used when the comparison companies are in the same industry as the organization for which a valuation is being compiled. Ideally, the operations of a comparison company are quite similar to those of the entity being valued. Comparison organizations that would be ideal for a multiples analysis would have some mix (or all) of the following characteristics:

- Similar sales volume
- Similar capital structures
- Similar products and services
- Similar positions in the product life cycles for their products
- Similar credit ratings
- Similar geographic coverage
- Similar distribution channels
- Similar markets served
- Management teams with similar levels of knowledge and experience

## Business Valuation

- Similar competitive positions within the industry

The typical approach to a multiples analysis is:

1. Create a list of the top ten publicly-held companies most comparable to the company for which a valuation is being compiled.
2. Find the current market valuation for each business, which is easily obtained through Yahoo Finance, Google Finance, or a similar Internet site.
3. Obtain the revenue information for the past 12 months for each business, either from SEC filings or the Internet sites just noted. Compare revenues to the total company market valuation to arrive at a sales-to-market-value multiple.
4. Obtain the EBITDA information for the past 12 months for each business, either from SEC filings or the Internet sites just noted. EBITDA is earnings before interest, taxes, depreciation, and amortization. It is a rough measure of the cash flows of a business. Compare EBITDA to the total company market valuation to arrive at an EBITDA-to-market-value multiple.
5. Multiply the target company's revenue and EBITDA amounts for the past 12 months by the median multiples for the target group to derive valuations.

The following example illustrates the concept.

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### EXAMPLE

High Noon Armaments routinely acquires other businesses within the firearms industry, and so conducts an annual review of the revenue and EBITDA multiples associated with the smaller publicly-held companies in the same industry. Accordingly, the acquisitions staff prepares the following multiples analysis.

Multiples Analysis  
Firearms Industry  
As of January 10, 20xx  
(000s)

<u>Name</u>	<u>Market Capitalization</u>	<u>One Year Revenues</u>	<u>One Year EBITDA</u>	<u>Revenue Multiple</u>	<u>EBITDA Multiple</u>
Arbuckle Weapons	\$145,000	\$174,000	\$19,300	0.8x	7.5x
Billy the Kid Designs	90,000	117,000	11,500	0.8x	7.8x
Heston Shotguns	128,000	160,000	24,200	0.8x	5.3x
Patton Siege Guns	210,000	210,000	30,000	1.0x	7.0x
Plasma Weapons	52,000	24,000	3,900	2.2x	13.2x
Quigley Artillery	360,000	240,000	42,400	1.5x	8.5x
Rifled Custom Guns	<u>76,000</u>	<u>19,000</u>	<u>3,200</u>	<u>4.0x</u>	<u>24.0x</u>
Totals	<u>\$1,061,000</u>	<u>\$944,000</u>	<u>\$134,500</u>	<u>1.1x</u>	<u>7.9x</u>

Thus, the review shows a weighted-average revenue multiple of 1.1x and a weighted-average EBITDA multiple of 7.9x.

## Business Valuation

One month later, High Noon is engaged in a valuation analysis of a prospective acquisition, which has annual sales of \$6.8 million and EBITDA of \$400,000. Based on the multiples analysis, High Noon arrives at the following possible valuations for the company:

	<u>Revenue</u>	<u>EBITDA</u>
Target company results	\$6,800,000	\$400,000
× Industry average multiple	<u>1.1x</u>	<u>7.9x</u>
= Valuation based on multipliers	<u>\$7,480,000</u>	<u>\$3,160,000</u>

The results suggest quite a broad range of possible valuations, from \$3,160,000 to \$7,480,000. It is possible that the target company has unusually low EBITDA in comparison to the industry, which is causing its EBITDA-based multiplier to be so low. This means that High Noon might want to push for a lower valuation if it proceeds with the acquisition.

**Tip:** If some of the comparison entities more closely match the target company than others, consider weighting the results of those entities higher when developing a multiples analysis.

When a multiples analysis results in a wide dispersion in the valuation data, it will be necessary to add more companies to the analysis. By doing so, it is easier to identify a pattern in the data that can be used to derive a justifiable valuation.

It is most common to multiply the valuation multiples by the revenue and EBITDA information for the target company for its last 12 months. This is known as *trailing revenue* or *trailing EBITDA*. This is the most valid information available, for it represents the actual results of the business in the immediate past. However, if a target company expects exceptional results in the near future, then it prefers to use *forward revenue* or *forward EBITDA*. These measurements multiply expected results for the next 12 months by the valuation multipliers. While the use of forward measurements can create a good estimate of what a business will be worth in the near future, it generally incorporates such optimistic estimates that it tends to result in excessively high valuations. Conversely, there is a danger in using trailing information if historical performance is not expected to continue into the future.

**Tip:** If a valuation is based on forward revenue or EBITDA, then do so based on internal budgeted information for the projected period, and only if there is a solid track record of having met these budgeted numbers in the past.

A multiplier analysis that is based on revenues is useful in cases where a business is in high-growth mode, where there are typically fewer profits. This is because such businesses have elevated expenditure levels to hire staff, acquire more facilities, and other issues related to faster growth. However, creating a valuation based solely on revenues is dangerous, since a target company may be generating those revenues by selling at such rock-bottom prices that it will be impossible for the acquirer to turn a profit. Also, high revenues do not mean that a business is being well run. In short, a revenue-based multiplier should be supplemented by other valuation techniques.

The EBITDA multiple is a much better basis for a valuation than the revenue multiple, since it reflects the ability of a business to generate a profit. However, one should examine the EBITDA for the past few years as well, to see if the management of the target company is cutting back on expenditures in the current year in order to make the business appear more profitable. Also, the EBITDA figure may need to be adjusted, if certain line items in the income statement are not valid. For example:

- Revenue may have been recognized sooner than is allowed under the accounting standards. These transactions should be reversed.

## Business Valuation

- There may be an inadequate allowance for doubtful accounts, which will call for an increase in the bad debt expense.
- The entity may not have written down obsolete inventory, which would require a charge against the cost of goods sold.
- Inordinately small expenses may have been capitalized, so that they have not yet been charged to expense and have overloaded the balance sheet. It may be necessary to reverse these capitalizations by charging certain assets to expense.
- There may be unrecognized contingent liabilities, for which a reserve should be charged to expense.

The usual result of these changes is that EBITDA is reduced, which in turn reduces the valuation derived from a multiples analysis.

**Tip:** When deriving a valuation, apply both the revenue *and* EBITDA multiples. If the revenue multiple results in a lower valuation than the EBITDA-based valuation, then a business has higher profits than the average for the industry. The reverse situation indicates lower-than-average profitability. In either case, the relationship between the valuation levels can be used as the basis for additional due diligence.

There are several problems with multiples analysis to be aware of. They are:

- *Company size.* The information used for multiples analysis comes from publicly-held companies, and those companies are generally larger ones. Thus, the multiples that they command may not be applicable to smaller, privately-held organizations.
- *Conglomerates.* If a target company dabbles in multiple industries, then it is extremely difficult, if not impossible, to construct a multiples analysis for it. This is a particular problem when a proposed valuation for an entire company is based on just one subsidiary located in an industry where multiples are highest. Given the difficulty of analysis, it may be better to use the discounted cash flows method instead (see the Discounted Cash Flows section).
- *Market capitalization.* A very large publicly-held company may have higher multiples than smaller companies, if only because it has a more liquid market for its shares and more institutional investors authorized to own its shares. Thus, comparing a larger firm's multiples to a small private company can be misleading.
- *Outliers.* It is quite common for a few companies in the comparison analysis to have unusually high or low multiples. It is also common for an acquirer to fixate on those businesses with the lowest multiples, while target companies do the reverse. Instead, throw out the high and low outliers and focus on the median multiples, which give the best general idea of valuation.
- *Price swings.* The stock price of a company may vary significantly over just a few days, so the specific date on which a multiples table is compiled can have a resounding impact on multiples. Some of this difficulty can be avoided by using the average stock price for the past month or an even longer period.
- *Thin trading.* A public company whose shares trade over-the-counter rather than on a stock exchange will likely be thinly traded, which means that even a few trades may significantly alter share prices, resulting in unusual multiples.
- *Transitory revenue.* Both the revenue and EBITDA multiples can be skewed if a company has recorded transitory sales. These are typically larger, one-time sales that are not expected to recur, such as a one-time government contract. Examine the underlying details of a business and strip away these sales before applying any revenue or EBITDA multiples.
- *Underlying quality.* A major problem with using multiples to derive valuations is the assumption that a business being valued is about the same as every other company included in the multiples analysis. If the business has much better fundamentals than other companies, such as a more recent product line, then it may be worth much more than the multiples would indicate. Conversely, a

## Business Valuation

poorly-run business with low-quality assets may not justify the valuation that a multiples analysis would indicate for it.

The last point, regarding the underlying quality of a target company, underscores the main problem with multiples analysis. In short, this may seem to be an ideally quantitative type of analysis that yields a strong justification for a particular valuation, but in reality it only suggests what an average business may be worth, based on a cluster of other average businesses. A company with unusual business fundamentals could be worth substantially more or less than a multiples analysis would indicate.

### Discounted Cash Flows

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One of the most detailed and justifiable ways to value a business is through the use of discounted cash flows (DCF). Under this approach, the expected cash flows of a business are forecasted, based on extrapolations of its historical cash flow and changes in future conditions. A discount rate is then applied to these cash flows to arrive at a current valuation for the business. The steps in the process are:

1. Create an estimate of the cash flows to be derived in each of the next five years.
2. After the five-year period, estimate a second set of cash flows that are assumed to continue in perpetuity at a certain rate of growth (or decline) per year. This is typically based on the cash flows in year five. We use this approach after year five, because it is impossible to estimate cash flows with much precision so far in the future.
3. Calculate the net present value of all future cash flows, using a discount rate. The result is the present value of the business.

### Post Five-Year Cash Flows

The preceding itemization of the steps to follow for a DCF included the assumption of a perpetual rate of growth or decline in an organization following five years of detailed cash flow analysis. This is an extremely difficult number to arrive at, for slight changes in the rate of growth or decline can have a major impact on the valuation of the target. Here are several options for dealing with these post five-year cash flows:

- *Ignore.* A valuation could be based on only five years of cash flows, without factoring in any further cash flows. This argument is based on the proposition that a business is in a risky operating environment, and does not have good prospects for cash flows after the next five years.
- *Risk adjustment.* If a perpetual rate of growth or decline is used, include an extremely high discount rate to reduce the present value of these cash flows to quite a small amount. The discount rate applied to the first five years of cash flows may be substantially smaller, since those cash flows are in the near future, and so can be more easily predicted.
- *Assume sale of the business.* Assume that the business will be sold to a third party at the end of year five. This brings up the issue of what the business might be worth in five years, which is difficult to determine, and which may call for a higher discount rate to reduce its present value.

In general, it is difficult to deal with post five-year cash flows, due to their uncertainty. The result may be any of the preceding options. The author has generally ignored cash flows more than five years in the future, based on lengthy experience with being unable to predict such flows. Actual cash flows have nearly always been lower than predicted even a few years in the future, so any use of post five-year cash flows should be reduced to the greatest extent possible. Otherwise, the resulting valuation is likely to be too high.

### Negotiation of DCF Contents

There can be a considerable amount of manipulation involved in adjusting the items to be included in a discounted cash flow analysis. In the case of an acquisition, the seller invariably wants to exclude selected expenses from the calculation, on the grounds that they were one-time events that the acquirer will not



## Business Valuation

experience in the future. The seller will also identify a large number of expense exclusions that are based on presumed synergies. The result, according to the seller, is likely to be startlingly high cash flow that the target would be unlikely to ever achieve in practice. It is the task of the acquirer to sort through these alleged expense reductions and verify which ones may actually be achieved.

### Adjustments to DCF

A DCF is heavily based on historical information. If so, there may be historical revenues and expenses in the model that need to be adjusted to more accurately reflect future cash flows. Here are a number of examples:

- *Rent.* Historical rent rates are not likely to continue into the future. There may be changes in supply and demand that will require a rent expense adjustment, either up or down.
- *Gains and losses.* Historical gains and losses are usually associated with one-time asset sales. These transactions should be removed from future estimates.
- *Lawsuits.* If there have been payouts or proceeds from a lawsuit, these transactions should be considered one-time events. The only exception is when there has been an ongoing series of lawsuit settlements that are associated with the company's operations, and which can be expected to continue into the future in a predictable pattern.
- *One-time events.* There may have been losses in the past due to fires, flooding, storms, and so forth that are not expected to occur again. These events should not be carried forward into the projections.
- *Compensation.* The employees of a business may have been persistently underpaid in the past. If so, factor in a pay boost to bring the staff up to a more competitive pay rate, which will require a change to the DCF model. The same adjustment may need to be made if existing benefits are too low.
- *Insider deals.* There may be deals with suppliers that are controlled by key members of the business. If these deals involve the company having to pay above-market rates, adjust the related DCF cash outflows back down to market rates (if the deals can be terminated).

### Scenario Analysis

It can be useful to derive a set of discounted cash flows for a business, each one tied to a different future outcome. A probability of occurrence is assigned to each of these outcome scenarios. The probability of occurrence is multiplied by the DCF for each outcome and added together, resulting in an expected DCF.

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#### EXAMPLE

Spud Potato Farms currently generates \$2,000,000 of DCF as a supplier of potatoes to a number of restaurant chains. The company's management team estimates that there is a 20% probability of permanently losing a major contract and not being able to replace it. There is also a 60% probability that all current business will be retained, and a 20% chance that the company is awarded a major new contract. The DCFs and probabilities associated with each scenario, as well as the expected DCF, are noted in the following table:

<u>Scenario</u>	<u>DCF</u>	<u>Probability</u>	<u>Extension</u>
Existing situation	\$2,000,000	60%	\$1,400,000
Loses major contract	1,800,000	20%	360,000
Adds major contract	2,500,000	20%	<u>500,000</u>
		Expected DCF	<u>\$2,260,000</u>

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## Business Valuation

A problem with the use of expected DCF is that only one outcome will actually occur, so the *expected* DCF will never happen (unless the expected DCF exactly matches the DCF for one of the outcomes). If there is any discomfort with the use of expected DCF, one can still develop DCFs for alternative scenarios and monitor the probability of occurrence for each one; if the probability changes, one can then switch to a DCF associated with that scenario that is now the most likely one.

The ongoing examination of several DCF scenarios is also useful, because it opens one to the possibility of different outcomes, rather than being locked into a single scenario. Having a broader perspective makes it less likely that new information not fitting into the one preferred scenario will be ignored.

### The Discount Rate

The rate used to discount cash flows to their present value is generally considered to be the cost of capital of the acquiring entity. The cost of capital is comprised of the cost of a company's debt, preferred stock, and common stock.

The cost of a company's debt is not just the average interest rate that it pays for all outstanding debt. Interest expense is tax-deductible, so the interest rate must be reduced by its tax impact. The calculation of the cost of debt is:

$$\frac{\text{Interest expense} \times (1 - \text{tax rate})}{\text{Amount of debt}} = \text{After-tax interest rate}$$

For example, if a company has \$1,000,000 of outstanding debt at an interest rate of 6%, and its income tax rate is 35%, then its after-tax interest rate is:

$$\frac{\$60,000 \text{ interest expense} \times (1 - 35\% \text{ tax rate})}{\$1,000,000 \text{ of debt}} = 3.9\% \text{ after-tax interest rate}$$

Preferred stock is the next component of the cost of capital. It is a form of equity that does not have to be repaid to the investor, but for which a dividend must be paid each year. This dividend is not tax-deductible to the company, so preferred stock is essentially a more expensive form of debt. The calculation of the cost of preferred stock is:

$$\frac{\text{Dividend expenditure}}{\text{Amount of preferred stock}} = \text{Preferred stock dividend rate}$$

For example, if a company has \$2,000,000 of preferred stock that requires an annual dividend payment of \$180,000, then the cost of the stock on a percentage basis is:

$$\frac{\$180,000 \text{ dividend expenditure}}{\$2,000,000 \text{ of preferred stock}} = 9\% \text{ preferred stock dividend rate}$$

The final component of the cost of capital is common stock, which is a more difficult calculation. The best way to calculate this cost is through the capital asset pricing model (CAPM). The CAPM is comprised of the following three elements:

- The risk-free rate of return, usually considered the return on a U.S. government security.
- The return on a group of securities considered to have an average risk level, such as the Standard & Poor's 500 or the Dow Jones Industrials.

## Business Valuation

- The beta of the company's stock, which defines the amount by which its stock returns vary from the returns of stocks having an average level of risk. A beta of 1.0 indicates average risk, while a higher figure indicates increased risk and a lower figure indicates reduced risk. Beta is available from a variety of research firms for most publicly-held companies.

The preceding component parts then plug into the following calculation of the cost of common stock:

$$\text{Risk-free return} + (\text{beta} \times (\text{average stock return} - \text{risk-free return})) = \text{Cost of common stock}$$

For example, if the risk-free return is 2%, the return on the Standard & Poor's 500 is 9%, and a company's beta is 1.2, the cost of its common stock would be:

$$2\% \text{ risk-free return} + (1.2 \text{ beta} \times (9\% \text{ average stock return} - 2\% \text{ risk-free return})) = 10.4\% \text{ cost of common stock}$$

If a company is privately-held, there will be no beta information for it. Instead, select a publicly-held firm that is operationally and financially similar to the company, and use the beta for this proxy firm.

**Note:** As interest rates decline, the debt portion of a company's cost of capital also declines, which means that the present value of cash flows increases, which in turn increases the valuation of a business.

After the cost of each element of the cost of capital has been determined, the next step is to calculate the weighted average cost of capital, which is based on the amount of common stock, preferred stock, and debt outstanding at the end of the most recent accounting period. The following table shows how to conduct the calculation. Note that the weighted average of the various elements of the cost of capital in the sample calculation is 12%, which would then be used in the discounted cash flow calculation as the discount rate.

### Sample Cost of Capital Calculation

	<u>Outstanding Amount</u>	<u>Interest Rate</u>	<u>Cost</u>
Common stock	\$10,000,000	15%	\$1,500,000
Preferred stock	2,000,000	8%	160,000
Debt	<u>4,500,000</u>	<u>7%</u>	<u>315,000</u>
Totals	<u>\$16,500,000</u>	<b><u>12%</u></b>	<u>\$1,975,000</u>

There are two situations where a different discount rate than the cost of capital might be used. They are:

- Incremental borrowing rate.* If there is a specific interest rate at which an acquirer intends to borrow funds in order to pay for an acquisition, it is reasonable to use that rate as the discount rate.
- Risk adjustment.* If an acquisition is perceived to be unusually risky, the discount rate can be increased to account for the additional level of risk. In particular, the discount rate could be increased for each successive year of the DCF analysis, since cash flows become more difficult to predict further in the future. A risk adjustment could also be added when a target company operates in a country where there is a risk of expropriation or where the regulatory environment is burdensome. The proper amount of a risk adjustment is difficult to quantify.

Barring the two circumstances just noted, use the company's cost of capital as its discount rate for the DCF model.

## Business Valuation

Once the discount rate has been obtained, how is it applied to the cash flows in a DCF model? It should be incorporated into a calculation of the *present value of 1 due in N periods*. The calculation is:

$$\frac{1}{(1 + \text{Interest rate})^{\text{Number of years}}}$$

In Excel, the formula is:

$$(1/(1+\text{Interest rate})^{\text{Number of years}})$$

For example, if the discount rate is 10% and you want to determine the discount for cash flows that will occur three years in the future, the Excel calculation is:

$$(1/(1+0.1)^3) = 0.75131$$

The following table includes these discount rates for the present value of 1 due in N periods for a period of five years, which is sufficient for calculating net present value for five years, using a range of likely interest rates.

### Present Value Table for 1 Due in N Periods

Number of Years	6%	7%	8%	9%	10%	11%	12%
1	0.9434	0.9346	0.9259	0.9174	0.9091	0.9009	0.8929
2	0.8900	0.8734	0.8573	0.8417	0.8265	0.8116	0.7972
3	0.8396	0.8163	0.7938	0.7722	0.7513	0.7312	0.7118
4	0.7921	0.7629	0.7350	0.7084	0.6830	0.6587	0.6355
5	0.7473	0.7130	0.6806	0.6499	0.6209	0.5935	0.5674

To use the table, move to the column representing the entity's discount rate, and move down to the "number of years" row indicating the discount rate to apply to the applicable year of cash flow. Thus, if a DCF calculation were to indicate \$100,000 of cash flow in the fourth year for a business, and the discount rate is 10%, then multiply the \$100,000 by 0.6830 to arrive at a net present value of \$68,300 for those cash flows.

The following example illustrates the compilation of cash flows for an organization, as well as their reduction to present value using a discount rate.

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### EXAMPLE

The CFO of High Noon Armaments is constructing a discounted cash flow forecast for Sinclair Side Arms. The CFO begins with the cash flow for the preceding 12-month period, which was \$5,800,000. The Sinclair management team claims that the following items should be added back to the cash flow figure:

- One-time charge of \$200,000 related to lawsuit judgment
- One-time bonus payment of \$120,000 made to the management team
- Elimination of \$60,000 for CEO travel and entertainment expenses that would go away once the CEO is terminated
- Reduction of \$400,000 in salary and payroll taxes related to the CEO, who will be terminated

## Business Valuation

- Reduction of \$92,000 for a leased warehouse that the management team had not quite gotten around to terminating on its own

The CFO does not exclude the \$200,000 lawsuit judgment, on the grounds that Sinclair has incurred a series of similar judgments from similar lawsuits in the past, and there is a significant possibility that it will continue to do so in the future. The CFO also does not exclude the \$120,000 bonus payment, since further investigation reveals that this was a performance-based bonus, and there is an expectation in the industry for this type of bonus to be paid; further, the amount is not unreasonable. The CFO accepts the combined \$460,000 expense reduction related to the CEO, since that expenditure will not be required in the future. Finally, the CFO elects not to exclude the \$92,000 warehouse lease, on the grounds that there is no evidence yet that the company can operate without the additional warehouse space.

In addition, the CFO's due diligence team comes up with the following suggestions, which are added back to the cash flow report for valuation purposes:

- \$200,000 for duplicated corporate staff who can be terminated
- \$80,000 from volume purchasing discounts
- \$320,000 from the consolidation of leases
- \$38,000 from the elimination of duplicated software maintenance charges

The due diligence team also notes that Sinclair's fixed assets are very old, and will require \$2,000,000 of expenditures in years two, three, and four to bring them up to standard.

Finally, the due diligence team prudently recommends that High Noon assume that Sinclair's cash flow will likely drop 5% in the year following the merger, as uncertainty causes some customers to switch to competitors. Cash flow growth thereafter should be 5% per year.

The CFO combines this information into the following table, in which he estimates the most likely cash flow scenario for the next five years. High Noon has a cost of capital of 9%, which is used to derive the discount rates noted in the table.

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>
Beginning* cash flow	\$5,800,000	\$6,608,000	\$6,938,000	\$7,285,000	\$7,649,000
Base level % change	-290,000	+330,000	+347,000	+364,000	+382,000
CEO expense reduction	+460,000				
Fixed asset replacements		-2,000,000	-2,000,000	-2,000,000	
Duplicate staff	+200,000				
Volume discounts	+80,000				
Lease consolidation	+320,000				
Software maintenance	<u>+38,000</u>				
Net cash flow	\$6,608,000	\$4,938,000	\$5,285,000	\$5,649,000	\$8,031,000
Discount rate	<u>0.9174</u>	<u>0.8417</u>	<u>0.7722</u>	<u>0.7084</u>	<u>0.6499</u>
Present value of cash flows	<u>\$6,062,000</u>	<u>\$4,156,000</u>	<u>\$4,081,000</u>	<u>\$4,002,000</u>	<u>\$5,219,000</u>
Present value grand total	<u>\$23,520,000</u>				

## Business Valuation

\* Considered to be the cash flow for the year, based on prior year results, not including fixed asset replacements

The CFO did not include any valuation for Sinclair after five years, citing the uncertainty of cash flow projections that far in the future.

**Note:** It may be necessary to factor into the DCF model any expected changes in working capital requirements for the target company. For example, if there is an expectation of increased sales through the forecast period, it would be reasonable to assume a reduction in cash flow based on the need for more accounts receivable and inventory to support the incremental increase in sales.

If a business has exhibited unstable cash flows in the past, it is a very good idea to create several DCF models for it, in which the key factors are tested that appear to be causing its cash flows to vary. For example, one could model the loss of a major customer, or a sudden increase in raw material costs, or the loss of a patent lawsuit – whatever is indicated by the circumstances. These extra analyses may point out specific weaknesses or potential strengths that lead to a different valuation.

In summary, the DCF model incorporates great detail about the cash flows of an entity and the synergies to be expected from it (in the case of an acquisition), though there is an increasing amount of uncertainty as cash flows go further into the future. The resulting model gives what is likely to be the most realistic view of the valuation of a business. However, it also incorporates many estimates regarding future events, so the model must be constructed carefully to yield results that can be attained in practice.

### When DCF Fails

Cash flows can certainly be considered one of the most important valuation measures, but this does not mean that it will work even in situations where there is a clear history of cash flows to be utilized. Specifically, DCF is most likely to overvalue a business when an organization's future survival is uncertain. A core assumption of DCF is that a business will continue in perpetuity, so that cash flows can be projected for a long ways into the future. When future survival is uncertain, cash flows could drop precipitously in the near term, so one must be watchful for indicators of a sudden decline, such as an impending inability to pay for obligations.

### Capitalization Model

A DCF model converts a stream of expected future cash flows for multiple years into a present value. The capitalization model converts the adjusted return for a *single period* into a valuation. This is done by dividing the adjusted return by the capitalization rate. First, we will explain the concepts of adjusted return and the capitalization rate:

- *Adjusted return.* This is the earnings or cash flows of a business, adjusted to remove one-time events. A variation on this concept is seller's discretionary earnings (SDE), which is explained in the next chapter. SDE focuses on a valuation from the perspective of an acquirer.
- *Capitalization rate.* This is a percentage that is divided into an expected economic return to arrive at a valuation. It is derived by subtracting the annually compounded rate of growth in the adjusted return from the discount rate (as derived in the preceding section). For example, there is an expectation of a 4% sustainable income growth rate, and an entity's discount rate is 14%. When the sustainable income growth rate is subtracted from the discount rate, we arrive at a capitalization rate of 10%.

For example, the owner of a business expects that the cash flows that his business will generate in the next year are \$100,000. If he uses a capitalization rate of 20%, the derived valuation will be:

## Business Valuation

$$\$100,000 \div 20\% = \$500,000 \text{ Valuation}$$

As indicated in the example, the capitalization model uses the expected adjusted return for a future period, rather than for a historical period.

A key flaw in the capitalization model is its basis in just a single year of results. If a business owner expects a one-time spike in earnings in the next year, he might be more inclined to use the capitalization model to derive an outsized valuation. Consequently, this approach only yields a reasonable valuation when the selected measurement period is representative of normal ongoing returns.

Another issue is that slight changes in the sustainable income growth rate can trigger large changes in valuation. For example, a business has a 12% discount rate and a 3% sustainable income growth rate, which results in a capitalization rate of 9%. When divided into the entity's adjusted return of \$100,000, the resulting valuation is \$1,111,111. If the sustainable income growth rate were to be increased to 4%, this would change the capitalization rate to 8%, resulting in a valuation of \$1,250,000. In this example, a 1% change in the sustainable income growth rate results in a 12.5% increase in valuation. Thus, slight changes in the capitalization rate can trigger outsized changes in valuation. If the sustainable income growth rate approaches the amount of the discount rate, the resulting valuation will be immensely high, rendering the entire capitalization model invalid.

The difference between the DCF and capitalization methods is how each one treats anticipated changes in future income. The DCF model incorporates these changes into the cash flows for each future period. The capitalization method incorporates these changes into the sustainable income growth rate. Since the DCF approach allows for a more fine-tuned approach to incorporating anticipated changes in future income into a valuation, we recommend the DCF method over the capitalization model. The one situation in which the capitalization model's simpler calculation can be expected to yield an outcome similar to that of a DCF model is when the adjusted return of a business is expected to be relatively stable or changing (either up or down) at a consistent rate.

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### EXAMPLE

Beaver Dam Electric operates a small hydroelectric facility that generates a consistent amount of power, year after year. Beaver has a 20-year contract with a local power distributor, which buys the power at a fixed annual rate, with built-in inflation provisions. This results in a consistent \$1 million cash flow for Beaver for a number of years into the future, plus inflation adjustments. Given the reliability of its cash flows, the capitalization method is a reasonable method to use for a valuation. The company's cost of capital is 15% and there is an expectation of a 3% sustainable income growth rate, resulting in a capitalization rate of 12%. Given this information, the derived valuation of Beaver Dam is:

$$\$1,000,000 \div 12\% = \$8,333,333 \text{ Valuation}$$

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### Replication Value

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An acquirer can place a value on a target company based upon its estimate of the expenditures it would have to incur to build that business "from scratch." Doing so would involve building customer awareness of the brand through a lengthy series of advertising and other brand building campaigns, as well as building a competitive product through several iterative product cycles. It may also be necessary to obtain regulatory approvals, depending on the products involved. There is also the prospect of engaging in a price war in order to unseat the target company from its current market share position. Here is a summary of the more likely expenditures to include in the derivation of replication value:

- Product development
- Production design and investment in new production equipment

## Business Valuation

- Working capital to support new product line
- Startup scrap and spoilage costs
- Branding expenditures
- Expenditures to set up and support a new distribution channel
- Cost of additional sales force or retraining of existing sales force

Further, if the acquirer could have bought a target company at once to avoid the preceding replication expenses, also include in the replication value the present value of foregone profits that the company could have earned during the process of replicating the business of the target company. In short, it is usually a very expensive process to replicate a business.

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### EXAMPLE

A target company is resisting a \$5 million buyout offer by High Noon Armaments, so High Noon examines the cost of replicating the product line that it wants to acquire. It estimates the following information:

	<u>Cost Estimate</u>	<u>Time Estimate</u>
Product development	\$420,000	10 months
Production line redesign	100,000	2 months
Startup scrap costs	20,000	--
Branding expenditures	180,000	6 months
New distribution setup	<u>110,000</u>	<u>4 months</u>
	<u>\$830,000</u>	<u>22 months</u>

The analysis shows that the replication value is less than \$1 million. Also, High Noon estimates that the present value of the profits that it would forego in the next 22 months by *not* purchasing the company is \$570,000. This leaves an incremental acquisition cost of \$3.6 million associated with buying the company right now. Also, the replication process will require nearly two years.

High Noon needs to decide if it is worth offering more than the \$3.6 million incremental cost of buying the company in order to be in the market with an active product line right now, rather than in two years.

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The replication cost requires an additional analysis, which is how long the replication will take. If the acquirer wants to jump into a market in the near future, replication of a target company is a near impossibility, since doing so may require multiple years of effort. Thus, the analysis of replication cost and time may lead an acquirer to assign quite a high price to a target company. In many instances, this results in what may appear to be an inordinately high valuation for a target company that is not generating much cash flow.

The analysis of replication value is an interesting one, for it involves the collection of estimates from within the company about replication costs, rather than the more typical analysis of a target company. This does not mean that the resulting information is more accurate – on the contrary, the acquirer does not own the products and businesses under consideration, and so may arrive at quite inaccurate estimates of replication costs. For this reason, always consider replication cost to be a supplemental analysis method, and use a more detailed analysis, such as discounted cash flows, as the primary valuation technique.

### Comparison Analysis

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A common form of valuation analysis is to comb through listings of acquisition transactions that have been completed over the past year or two, extract those for companies located in the same industry, and use them



## Business Valuation

to estimate what a business should be worth. The comparison is usually based on either a multiple of revenues or cash flow. In rare instances, the analysis may be based on recurring (contract) sales. Information about comparable acquisitions can be gleaned from public filings or press releases, but more comprehensive information can be obtained by paying for access to any one of several private databases that accumulate this information.

### **The Comparison of Sales Multiples**

A common approach for deriving the value of a business is to assemble the ratio of sale price to revenues for a group of comparable companies, and apply that ratio to the sales of the target company. This is a very easy approach, since the information is available in a number of merger and acquisition databases. Any company that wants to be sold will engage the services of an investment banker who will use sales multiples to derive the value of the business. However, there are a number of problems with the sales multiple valuation method, including the following:

- *Link to profits.* A company may generate sales by setting its prices extremely low. Doing so means that profits and cash flow will be low, if they exist at all. Thus, someone paying a multiple based on sales may find that it has acquired an essentially worthless business that will never generate a profit.
- *Comparison group.* The seller will attempt to match itself to whichever industry niche has generated the highest sales multiples. The acquirer must verify that the target company actually engages in the same line of business as those in the comparison group, and not a different group in another industry niche for which sales multiples are lower.
- *Fundamentals.* Another company may have obtained a high sales multiple, but for a very specific reason that was attractive to the acquirer, such as a key patent or distribution channel. If the target company does not have a similar feature that is worthwhile to the acquirer, there is no reason to apply the comparison sales multiple to the proposed transaction.
- *Outliers.* A target company may collect a group of unusually high sales multiples from other transactions and attempt to apply them to the proposed sale transaction. The acquirer should be wary of these selective comparable transactions, which may in fact be outliers in comparison to the normal sales multiples typically obtained in the industry.

In short, the sales multiple is more of a tool for the target company, not for the acquirer. It can distort the valuation of a business, since the comparison solely to sales does not account for any other factors, such as profitability or cash flow, with which an acquirer should be deeply concerned.

### **The Comparison of Cash Flows**

If a valuation is created based on a comparison of cash flow multiples elsewhere, be aware that these multiples vary widely by industry. Thus, the cash flow multiple for software may exceed 20x, while manufacturing multiples are in the range of 5-10x, and retail is typically 2-4x. Consequently, be very clear about which cash flow multiples to include in a comparison. This is a particularly difficult comparison when reviewing the results of a sale that involves businesses in multiple industries, since the multiple cannot easily be assigned to a single industry area.

### **The Comparison of Contract Revenues**

If a company is situated in the government sector, or in any other sector where revenues are associated with large contracts, a possible valuation technique is a multiple of recurring yearly contracts. There is a considerable difference between one-time contracts and those expected to renew for a number of years, since a recurring contract represents more reliable cash flow. There may be a history of prior sales for which contract multiples are available, in which case it could be applied to a valuation. However, there are several considerations that can alter a valuation based on this type of multiple:

## Business Valuation

- *Remaining contract period.* The group of contracts to which the contract multiple will be applied will be of different lengths. Some may be funded only for the next year or two, while others may have considerably longer terms. It may be necessary to apply a reduced contract multiple if the bulk of the contracts are scheduled to expire sooner, rather than later.
- *Prospects for renewal.* The multiple may require modification if the preponderance of contracts have a high or low likelihood of renewal. Also, even if a contract is very likely to be renewed, what if the period of the renewed contract is only a few months or a year? This can also impact the multiple. Determining the prospects for renewal is very judgmental, and so can result in great variability from actual results.
- *Prospects for new contracts.* Any acquisition candidate always makes a strong case for the business that it has almost closed, and how that should be included in the valuation. See the Earnout section in the next chapter for a discussion of this issue.
- *Margins on contracts.* There could be a broad range of profit margins associated with the various contracts, but a single contract multiple is being applied to the entire group of recurring contracts. If there are substantial profit differences by contract, it may make sense to divide the contracts into groups by profit ranges, and apply a different multiple to each one.

The preceding list of considerations should make it evident that applying a single multiple to a group of contracts is an extremely rough way to calculate the valuation of a business. If you intend to use this method, it would be better to adopt a high degree of precision and apply different multiples to groups of contracts, based on their remaining duration, profitability, and prospects for renewal.

### 52-Week High

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The seller of a publicly-held business tends to be fixated on the highest stock price that it achieved over the preceding 52 weeks, and will insist on selling at a price near that price point. There are two reasons for this fixation:

- *Psychological.* No matter how much the stock price may have subsequently declined, the 52-week high represents a relatively recent valuation, and the seller still believes it is worth that amount.
- *Lawsuit risk.* The board of directors may feel that selling at this price point reduces the risk that they will be sued by shareholders for not negotiating a fair price.

It may be difficult for the acquirer to justify paying a price anywhere near the 52-week high, especially if the stock price has declined markedly since then. If so, it would be best to walk away from such a deal and wait for the buyer's expectations to decline.

### Influencer Price Point

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A potentially important point impacting price is the price at which key influencers bought into a business. For example, if someone can influence the approval of a sale, and that person bought shares in the company at \$20 per share, it could be exceedingly difficult to offer a price that is at or below \$20, irrespective of what other valuation methodologies may yield for a price.

Further, if influencers have held their shares for some time, they may expect a rate of return on their initial investment, which the acquirer can roughly estimate. Thus, if an influencer bought shares at \$20 one year ago, and a similar investment in the same time period should have yielded a return of 10%, then the influencer will probably not accept a purchase offer of less than \$22 per share.

The influencer price point has nothing to do with valuation, only the minimum return that key influencers are willing to accept on their baseline cost. If the amount they want is nowhere near what more rational valuation methods state the business is actually worth, then it may be best to walk away from the

deal. It is possible that, once sufficient time has passed, key influencers may want to shift their holdings into other investments, and will therefore take a reduced price once rational thinking has set in.

### **The Initial Public Offering Valuation**

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A privately-held company whose owners want to sell it can wait for offers from potential acquirers, but doing so can result in arguments over the value of the company. The owners can obtain a new viewpoint by taking the company public in the midst of the acquisition negotiations. This has two advantages for the selling company. First, it gives the company's owners the option of proceeding with the initial public offering and eventually gaining liquidity by selling their shares on the open market. Also, it provides a second opinion regarding the valuation of the company, which the sellers can use in their negotiations with any potential acquirers.

However, this approach also has some problems. First is the million-dollar cost usually associated with taking a company public. Also, the IPO process requires an enormous amount of effort, and can seriously interfere with management's ability to run the business. Further, a company may be so small that taking it public is not a serious option. And finally, the sellers may find that they are required to hold their shares in lockup agreements as a condition of taking the company public, and so cannot liquidate their shares for at least six months after going public.

The problems just noted keep most companies from engaging in the IPO ploy to obtain a high valuation. Nonetheless, it may be worthwhile for a privately-held business that is sufficiently large to go through with an IPO, and which is having a difficult time convincing suitors to propose a valuation that the owners believe properly values the business.

### **The Strategic Purchase**

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The ultimate valuation strategy from the perspective of a target company is the strategic purchase. This is when the acquirer is willing to throw out all valuation models and instead consider the strategic benefits of owning the target company. For example, an acquirer can be encouraged to believe that it needs to fill a critical hole in its product line, or to quickly enter a product niche that is considered key to its future survival, or to acquire a key piece of intellectual property. In this situation, the price paid may be far beyond the amount that any rational examination of the issues would otherwise suggest.

The downside of a strategic purchase is that the buyer is more likely to dismantle the target company and fully integrate the business into its own operations, on the grounds that the strategic value gained must be maximized by rolling it into the acquirer's organization to the greatest extent possible. Thus, this type of valuation certainly maximizes the return to shareholders, but sometimes at the cost of the complete elimination of the underlying business as a cohesive unit.

### **Extraneous Valuation Factors**

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An acquirer may be unduly influenced by a number of factors that have little to do with the intrinsic value of a target company. These other factors may increase the price it is willing to pay to levels that are well beyond the results of any reasonable quantitative analysis. For example:

- *Purchase by competitor.* There may be a considerable value associated with keeping a target company away from a competitor, if only to acquire intellectual property that could interfere with the business of that competitor.
- *Speed.* The acquirer may be interested in closing a deal fast for a number of reasons, such as meeting an acquisition target by year-end, or prior to a shareholders meeting.

It is also possible that certain factors will reduce the value of a target company. A common concern is that a business is too small to be acquired. This situation arises when it will take too large a commitment of the acquirer's time to investigate and negotiate for a small business, in relation to the amount of revenue and

cash flow that it will receive in return. In this situation, the seller may need to offer a relatively low price in order to attract the attention of the acquirer.

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### EXAMPLE

Behemoth Medical has an established strategy of growing primarily by acquisition. Given the cost of due diligence, Behemoth has a policy of not reviewing any potential acquirees that have sales of less than \$5 million, unless these entities agree up front to a 20% reduction in their valuations.

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### The Control Premium

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When investors purchase stock in a business, they gain the right to dividends, any appreciation in the market price of the stock, and any final share in the proceeds if the business is sold. If an investor buys at least a 51% controlling interest in a business, then it also obtains the right to redirect the business in any way it chooses, which includes the following activities:

- Acquire or sell off assets
- Alter the articles of incorporation and/or bylaws
- Buy back shares
- Change compensation and bonus award levels
- Change the board of directors
- Change the management team
- Liquidate the business
- Pay dividends
- Sell shares or bonds
- Set strategic direction, including acquisitions, products, and distribution channels
- Take the company public or take it private

In some states, a supermajority is needed in order to enact the preceding actions, so the controlling interest might instead be as high as 67%.

Obtaining a controlling interest is worth an additional price, which is known as the control premium. This premium can be an insignificant issue if a business is on the verge of bankruptcy, since the presumably short-term nature of the entity makes the control premium essentially irrelevant. However, if the firm is a robust business that can be enhanced by the acquirer, then the control premium can be a significant factor. Historical evidence shows that control premiums for healthy businesses can range from 30% to 75% of the market price of its stock.

The control premium is not a black-and-white concept, where the first 51% of ownership is more valuable than the remaining 49%. Instead, consider the multitude of situations where ownership is split among many owners. For example, what if there are three shareholders, with two owning 49% and one owning 2% of the shares? In this case, the 2% shareholder owns an extremely valuable piece of the business, given its ability to impact votes, and which would certainly command a premium. Alternatively, what if there are hundreds of small shareholders and one shareholder who owns 35% of a business? Owning that 35% might not result in outright control of the business, but it may be so much easier to obtain in comparison to the pursuit of hundreds of other shareholders that it commands a premium. Also, a majority block of nonvoting stock may be valued less per share than a much smaller block of voting shares, since there may be few buyers willing to pay for shares that have no voting interest in company decisions.

The control premium concept is a key reason why acquirers sometimes reduce their offer prices for any remaining shares outstanding in a two-tier acquisition. Under the two-tiered approach, the acquirer offers a better deal for a limited number of shares, such as a higher proportion of cash or a higher price. This initial tier is designed to give the acquirer control over the target company. It then makes a reduced offer for an

additional group of shares through a second tier that has a later completion date. If the acquirer has already attained control over a business, there is no longer a control premium associated with any additional shares, which therefore reduces their value.

### **The Lack of Control Discount**

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When a shareholder owns less than a majority interest in an entity, ownership of the shares gives no control over the business. This translates into a valuation discount, which can be in the general range of 20%. After all, someone buying these shares would receive no control over the business, and so would demand a discount. However, if there is no clear majority shareholder, then any minority interest could represent the “swing vote” in a voting block; if so, the lack of a control discount may not apply to a minority shareholder.

#### **EXAMPLE**

Rapunzel Hair Products has over 100 shareholders. The largest shareholder owns 40% of all outstanding shares. The next largest shareholder owns 11% of the shares, while all other shareholders own the remaining shares, with no one shareholder in this latter group owning more than 2% of the shares.

The next largest shareholder clearly possesses a swing vote, since his shares combined with those of the largest shareholder comprise 51% of the total outstanding shares. The largest shareholder could possibly work with the other shareholders to create a majority voting group, but it is much easier to work with the second largest shareholder. Consequently, the second largest shareholder may not be subject to a lack of control discount.

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A lack of control discount is not present when there are put rights associated with shares. In this situation, a shareholder can require another party to buy the shares at a certain price, and for a certain period of time. This means that there is a floor on the value of the shares.

The lack of control discount is reduced when there is a consistent history of dividends being paid to shareholders. In this situation, there is an identifiable cash flow associated with the shares, which establishes a floor for the valuation of the shares.

### **The Lack of Marketability Discount**

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A privately-held business has a reduced valuation from the valuation that can be developed for a publicly-held entity, because the private firm’s shares do not trade on a stock exchange where pricing is set on a continual basis, and shares can be easily bought and sold. Further, there are far fewer investors willing to buy the shares of privately-held businesses precisely because of the lack of marketability, which drives down the demand for these shares. Further, lenders do not like to accept these shares as collateral for a loan, since the lenders might have a difficult time selling them in the event of a default; this further reduces the demand by investors. Thus, there is a discount related to the inherent illiquidity of this type of investment.

The lack of marketability can be a particular problem for the minority shareholders of privately-held businesses. In this case, there may already be a lack of control discount that is reducing the valuation of their shares. On top of this is an additional discount for lack of marketability, which can result in a valuation of less than half the amount experienced by the majority shareholder of a publicly-held entity.

The lack of marketability is an issue even for the majority owner of a privately-held business, since selling the interest requires either taking the business public or (more likely) selling the entity to a third party through a fairly involved process of marketing the business, engaging in negotiations, due diligence, and closing. Further, the price paid to the owner may not be in cash; it might be in the form of the debt or equity of the acquirer. These alternatives are time-consuming and expensive, and so translate into a lack of marketability discount.

### The Key Person Discount

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When a business is highly dependent on the performance of a single individual, there is a risk of a sharp decline in the fortunes of the business if this person were to leave or be incapacitated. That being the case, a discount may be applied to a valuation when a key person is identified, and especially when there appears to be a risk that the individual will leave the organization.

A key person can be located anywhere within a business. For example, it could be a salesperson that brings in the bulk of all sales, or an engineer who has designed all of a company's key products, or an industrial engineer that has constructed an unusually efficient production process. This person does need to be a shareholder, founder, or member of senior management.

### The Portfolio Discount

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An organization may own such a broad range of dissimilar business units that it would not be a viable purchase for most entities. For example, a conglomerate might sell at a discount to the value that could be derived if the entity were to be broken up and sold off to multiple buyers. Potential buyers prefer to acquire entities that are narrowly focused on a specific market, where all of their assets are targeted at sales to a specific group of customers. The result is a greatly reduced pool of potential buyers for conglomerates, which can reduce the prices offered for them.

### The Choice of Valuation Methods to Use

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We have presented a number of possible methods for deriving the valuation of a business. Which ones should be used? That depends on a number of factors, which are as follows:

- *Availability of information.* There may be little information available for certain valuation methods, which essentially precludes the use of these methods. For example, a market-based valuation may not be possible if a company is located in an obscure industry for which there is little comparable information. Or, a valuation request may come from a minority shareholder who is not allowed access to a company's financial records, thereby eliminating any asset-based evaluations.
- *Availability of valuation standards.* Certain industries experience a large number of acquisitions, so there is a large base of information from which rules of thumb (see the next chapter) can be derived. These rules of thumb can be used to set high-low boundaries for the range within which a valuation is likely to be.
- *Proportion of ownership.* When a shareholder owns only a portion of a business, this introduces the need for an analysis of a lack of control discount. Also, as noted for the availability of information factor, a minority shareholder may not have access to internal company information that would normally be used to derive a valuation.
- *Life cycle position.* A company may be early in its life cycle, where it is burning through cash at a prodigious rate in order to increase its market share. In this situation, there are no cash flows from which a discounted cash flows analysis can be derived, which forces one to use alternative valuation methodologies.

### The Valuation Floor and Ceiling

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We have presented a number of ways to create a valuation for a company. The trouble is that if all of them were to be used, there would be an incredibly broad range of possible valuations from which to choose. There may be orders of magnitude between the valuation indicated by a liquidation analysis and the price an acquirer is willing to pay for a strategic purchase. How can a path be found amongst these numbers?

The key issue is that, eventually, most acquisitions must present positive cash flow, even if it takes some optimistic forecasts to arrive at positive cash flow projections. The only valid reason for setting a

## Business Valuation

valuation higher than what any cash flow projection indicates is when an acquirer wants to keep an entity away from a competitor. Consequently, the discounted cash flow model should be the key valuation methodology.

While a discounted cash flow analysis should always be used, this does not mean that it should be used to the exclusion of all other methodologies. In the following bullet points, we have clustered those valuation methods that tend to yield low, medium, and high valuations. Select one valuation method from each of these clusters in order to establish a range of valuations. From the perspective of an acquirer, this gives some leeway in regard to what the final price will be. Thus, a buyer will be comfortable using the valuation based on discounted cash flows, but will push for a price closer to liquidation value, and may accept a price closer to the amount indicated by a strategic purchase analysis. The valuations are:

### Low valuation tendency

- *Liquidation value.* Tends to yield the lowest possible valuation. This is useful for establishing the amount an acquirer can sell a business for if an acquisition does not go as planned, rather than for establishing the price the acquirer will insist on paying.
- *Book value.* States the amount at which a business could be sold at the values stated in its balance sheet. Actual results likely vary considerably from book value.
- *Real estate value.* Tends to be close to liquidation value, and only applies to target companies with significant real estate holdings.

### Medium valuation tendency

- *Asset accumulation method.* Applies fair value to all assets and liabilities, including those not currently listed on an entity's balance sheet. Can yield a reasonably accurate valuation. However, there is no consideration of a control premium.
- *Enterprise value.* States the current amount at which the acquirer could buy a business. It only applies to those businesses for which there is a ready market for its stock, and does not include a control premium. Thus, it tends to be one of the lower valuations.
- *Multiples analysis.* Is based on the valuations of other publicly-held businesses in the same industry, and so is similar to the enterprise measurement approach; and like that measurement, it does not include a control premium. Thus, it also tends to be one of the lower valuations.
- *Discounted cash flows.* Based on estimated future cash flows. If these cash flows are carefully reviewed and tested against historical results, this can yield excellent results. The results tend to be in the middle of the cluster of valuations.
- *Capitalization model.* Generates similar results to the DCF method. Valuations tend to be somewhat higher, since this method is less refined than the DCF method, and so tends to overestimate valuations.
- *Replication value.* Indicates the "go it alone" cost required to duplicate a business that an acquirer wants to buy. This can yield one of the higher valuations. Since it is largely based on estimates, it is not sufficient as the sole source of valuation information.
- *Comparison analysis.* Estimates the valuation based on the prices paid when similar businesses were sold in the recent past. This analysis includes the control premium, and so tends to yield a higher valuation.

### High valuation tendency

- *52-Week high.* Based on an arbitrary high point in the stock price in the past year. If that high point was an outlier price, the resulting valuation could be inordinately high. This only works if there is an active market for the company's stock.
- *Influencer price point.* Based on the price at which a decision maker bought into a company. This price point could be anywhere, ranging from very low to very high.

## Business Valuation

- *IPO valuation.* Based on the price at which a company intends to go public. This can be a very high valuation. Due to the cost of an IPO, this option is rarely used.
- *Strategic purchase.* Based on other considerations than cash flow, and can yield a startlingly high price.

Another way of looking at a range of valuation outcomes is what to do with the outlier values. For example, three valuations may be clustered quite closely together, with one valuation well away from the rest of the group. Possible actions are:

- Throw out the outlier, on the grounds that there are a sufficient number of alternative analyses to justify the valuation implied by the other methods.
- Give the outlier valuation a low weighting in comparison to the weighting given the other outcomes, on the grounds that the outlier method is still valid to some extent.
- Examine the workup of the outlier valuation to see if there was an error in the use (or non-use) of a variable that caused the unusual valuation outcome. This last approach is recommended, since it could uncover an issue that has a significant impact on valuation, and which results in a higher weighting of the outlier outcome in the final valuation.

A possible final outcome of a valuation analysis is that a cluster of valuations generate a band of possible outcomes, with no one valuation being better than another. If so, a possibility is to report a range of values, such as being between \$42 and \$48 million.

In summary, one might consider spending a modest amount of time establishing liquidation value, certainly calculate a detailed discounted cash flow, possibly also compile a comparison analysis, and then establish the high-end valuation by engaging in a strategic purchase review. Doing so results in a mid-range valuation that probably comes from the discounted cash flow method, around which high-low boundaries are set by the strategic purchase review and liquidation analysis, respectively.

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### EXAMPLE

The author was involved in the sale of a business, where a nationally-recognized investment bank was hired to assist with the sale. Despite a lengthy sale process and the participation of several interested buyers, the only bid was from a company that was well known for “bargain basement” pricing. It submitted a bid for \$5 million. The seller withdrew from the selling process and tried again a year later, at which point it located a different bidder that viewed the purchase from a strategic perspective. The deal closed at an all-cash price of \$28 million.

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### Summary

Of the various valuation methods described in this chapter, the most quantitatively precise one is the discounted cash flows method. However, even that method is derived from a variety of estimates of future results. In short, even the DCF method can yield results that turn out to vary widely from subsequent actual results.

Valuation depends to a great extent upon the timing of the situation. At the bottom of a business cycle, a business may find itself in a difficult financial situation with minimal cash flows, in which case its valuation may hover close to its liquidation value. Conversely, the same business might find itself at the top of a business cycle, experiencing strong cash flows and being actively pursued by several acquirers that are will to make a strategic purchase.



## Review Questions

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1. The \_\_\_ approach to valuation compares the cash flows of a business to those of other businesses that have sold recently.
  - a. Income
  - b. Market
  - c. Asset
  - d. Seller's discretionary earnings
2. If the assets of a business were to be theoretically sold off, this is known as:
  - a. Book value
  - b. Enterprise value
  - c. Liquidation value
  - d. Discounted cash flows value
3. One way for the seller of a real estate-heavy business to optimize its sale price is to:
  - a. Only market the business to bidders with experience in real estate
  - b. Sell the real estate itself to maximize prices and then buy back shares
  - c. Insist on prices being derived from the discounted cash flows method
  - d. Borrow money and issue a large dividend to shareholders
4. The use of forward EBITDA multiples:
  - a. Tends to incorporate conservative estimates
  - b. Is used when future results appear to be uncertain
  - c. Tends to yield low valuations
  - d. Makes sense when future results are expected to be better than trailing results
5. A key flaw in the capitalization model is:
  - a. The use of an adjusted return
  - b. The use of a discount rate
  - c. Its basis in just a single year of results
  - d. In situations where the adjusted return is expected to be relatively stable
6. The following are reasons for the lack of marketability discount, except for:
  - a. Lenders do not like to accept private company shares as collateral
  - b. There are fewer investors willing to buy private company shares
  - c. Private company shares do not trade on a stock exchange
  - d. The audited financial statements of private companies are less reliable than those of public companies

# Chapter 2

## Additional Valuation Topics

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### Learning Objectives

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- Recognize the different types of intangible assets.
- Recall the different methods available for assigning valuations to intangible assets.

### Introduction

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In the preceding chapter, we laid out the basic valuation methods and noted how they can generate a range of possible valuations, depending on the circumstances. In this chapter, we expand the valuation discussion to a number of additional topics. We cover the valuation of intangibles, adjusting factors that can alter a valuation, valuation mistakes, and rules of thumb. We also note an acquisition-specific valuation topic, which is the use of earnouts.

### Valuation of Intangibles

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It is not especially difficult to place values on tangible assets, which are physical property (that can be touched). There may be a ready market for these assets, which can be referenced when deriving a valuation. This is not necessarily the case for intangible assets, where a ready market is less likely to exist. Examples of intangible assets are:

#### Marketing-related intangible assets

- Trademarks
- Newspaper mastheads
- Internet domain names
- Noncompetition agreements

#### Customer-related intangible assets

- Customer lists
- Order backlog
- Customer relationships

#### Artistic-related intangible assets

- Performance events
- Literary works
- Musical works
- Pictures
- Motion pictures and television programs

#### Contract-based intangible assets

- Licensing agreements
- Service contracts
- Lease agreements
- Franchise agreements

## Additional Valuation Topics

- Broadcast rights
- Employment contracts
- Use rights (such as drilling rights or water rights)

### Technology-based intangible assets

- Patented technology
- Computer software
- Trade secrets (such as secret formulas and recipes)

In the following sub-sections, we describe several valuation topics related to intangible assets.

### **Incremental Cash Flow Analysis**

The valuation of intangible assets may involve an analysis of the incremental cash flows associated with them. These cash flows can be subdivided into incremental improvements in revenue or incremental reductions in expenses. For example, a copyright generates additional revenue by keeping written materials from being sold by competitors. Conversely, a patent on a production process allows a business to keep its production costs lower than those of competitors, who are prevented by the patent from using the same technique. This approach only works if the cash flows associated with an intangible asset can be disentangled from the other cash flows of a business.

### **Intangible Asset Useful Lives**

When deriving cash flows for an intangible asset, take into consideration the time period over which the asset is still considered to have a useful life. No cash flows should be ascribed to periods following the end of an asset's useful life. This useful life could be defined by the period over which legal protection will be available for an asset (such as the legal patent protection period), or the remaining contract life (such as the term of a lease), or the remaining functional life (such as the period during which a technological innovation is expected to provide an advantage).

### **Aggregate Valuation**

At an aggregate level, the total value of the intangible assets of a business is the excess value of its cash flows above its net asset value. Making this determination at an aggregate level may be the only way to arrive at a value for intangible assets, because intangibles tend to be so interwoven with company processes that it is impossible to reliably disentangle the value of each one from the value of the business.

### **Excess Earnings Method**

A relatively weak valuation method that can be used to roughly estimate the valuation of intangibles is the *excess earnings method*. This method essentially derives the value of a business that is associated with its tangible assets, and then subtracts this amount from total value to arrive at a residual valuation that is ascribed to intangible assets. The calculation steps are:

1. Derive the market value of all tangible assets.
2. Estimate a rate of return that should apply to these types of tangible assets.
3. Calculate the estimated return on tangible assets.
4. Deduct this earnings figure from total earnings.
5. All residual earnings are assumed to be derived from intangible assets.

The excess earnings method cannot deliver precise information, because it is subject to so many variables. It requires estimates for tangible asset market values, as well as the return on tangible assets.

### **Comparable Pricing Method**

Another valuation possibility is to research the prices at which certain intangible assets have sold within the industry, and then apply these prices to an entity's intangible assets. This approach can be used for such assets as Internet domain names, trademarks, mineral rights, leasehold interests, and airport landing rights, for which there may be a certain amount of sale transactions. However, most intangible assets sell infrequently (if ever), and so this method would not apply to them. Another concern is that the sale prices for intangible assets are usually kept private, so comparative information is not readily available.

### **Replication Value**

Another option is to calculate the cost that would be incurred to reproduce an intangible asset "from scratch," and assign that cost to the asset. This approach works best for constructed intangibles, such as computer software, chemical formulations, and technical drawings. However, assuming that this cost equates to the valuation of such an asset can be a stretch, especially when the cash flows generated by constructed intangibles do not closely align with the presumed cost.

### **Relief-from-Royalty Method**

The relief-from-royalty method involves estimating the royalty that a company would have paid for the rights to use an intangible asset if it had to license it from a third party. This estimation is based on a sampling of licensing deals for similar assets. These deals are not normally made public, so it can be difficult to derive the necessary comparative information.

Under this method, any savings from not licensing an asset are considered on an after-tax basis. The reason is that, if the company had indeed licensed the rights from a third party, there would have been a licensing expense that reduced taxable income.

### **Asset-Based Valuations**

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Income-based valuations are (as the name implies) based on income or cash flows. However, there are a few instances in which a valid valuation could be derived from assets. This typically occurs in situations where an entire business is based on the value of its assets, such as timberlands, oil and gas reserves, and real estate. In these cases, it can make sense to accompany a more traditional income-based valuation with an asset-based valuation. This approach works best when the entity routinely reports the fair value of its assets; historical information could be badly out of date, and not representative of the current valuation of the organization.

### **Customer-Based Valuations**

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When deriving a valuation, it can be useful to look at the costs incurred by a company to obtain its customers, as well as its average retention period for those customers. When these costs are low and the retention period is extended, it is likely that the firm will enjoy above-average profits over the long-term, leading to a higher valuation. Conversely, a "growth at all costs" business that spends inordinate amounts to acquire relatively transient customers should be accorded a lower valuation.

Conducting a customer-based valuation requires more information than can be obtained from a firm's financial statements. The targeted company must be forthcoming about its average marketing expenditures per new customer acquired, provide historical data about how long it retains the average customer, and the average amount spent by its customers per reporting period. This means that such valuations are only workable when a friendly takeover is contemplated.

The easiest scenario in which to derive a customer-based valuation is when a company uses a subscription model, where customers are paying it a standard amount per month or year. In this situation, it is easy enough to forecast the amounts they will pay the business, and it is abundantly clear when a customer

## Additional Valuation Topics

cancels a subscription. The situation is more difficult when customers make discretionary purchases, since the amounts bought can vary, and it can also be difficult to determine when they stop buying from the firm.

A good way to visualize the revenues gained from customers is to track them by their acquisition year, and then show the revenues associated with each of these annual tranches of customers in subsequent years. If the sales from a tranche of customers persists across many years, then the longevity of sales should drive a higher valuation.

**Note:** A common outcome of a customer revenue analysis is the finding that a certain proportion of initially-acquired customers will drop out immediately after their first purchase, after which a more committed group of customers will continue buying from the company for an extended period of time.

### Excess or Deficient Assets

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When using a market approach to derive a valuation, there is an assumption that the asset base of the business will be similar to the asset base of any comparison companies used. What if this is not the case? For example, a business could have an unusually high cash balance. If so, one could add the fair value of these excess assets to the valuation. Conversely, if the business is asset poor, it could mean that a purchaser would have to invest more funds in the entity in order to bring the asset base up to a level considered competitive with the comparison companies. If so, the amount of the asset deficiency should be subtracted from the derived valuation.

There are most likely to be excess cash, marketable securities, receivables, and inventory. Deficiencies could arise in the working capital area. In addition, there may be unfunded pension liabilities, as well as unrecognized asset retirement obligations and environmental liabilities that could seriously detract from a valuation.

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### EXAMPLE

The management of Creekside Industrial likes to maintain a large reserve of cash, which it plans to use for acquisitions during the bottom of business cycles, when competitors can be acquired for less money. The excess amount of cash currently on hand is \$20 million. The privately-held company is valued by comparing its sales and profits to those of several publicly-held entities, which gives Creekside a preliminary valuation of \$180 million. The excess cash can be added to this valuation, resulting in a final valuation of \$200 million.

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### Adjustments for Business Risk

The valuation techniques discussed in the preceding chapter could result in a tight range of possible valuations, and yet could still be incorrect. One must also pay attention to business risk, which is the possibility that an organization's operations or competitive environment will cause it to generate financial results that are worse than expected. The following are all factors that can impact business risk:

- The amount of competition or potential competition
- The stability of an entity's market share
- The risk of lawsuits and the ability to mitigate this loss
- The amount of government regulation
- The stability of product price points
- The stability of raw material prices
- The impact of a decline in general economic conditions

## Additional Valuation Topics

An entity that has a high business risk should be operated in a more conservative manner in order to avoid the risk of failure. This means keeping the debt level as low as possible. If there is a need for additional funding and the business risk is high, management should prefer the use of equity funding.

If significant business risk is present, this can sharply curtail the valuation of a business. Further, if management is not operating a high-risk business in a financially conservative manner (such as by avoiding debt), the valuation may be even lower.

One way to account for business risk within a valuation calculation is to add a risk premium to the discount rate used to derive the present value of future cash flows. If there is a high perceived level of business risk, then a higher discount rate adjustment would result in a reduced present value of projected cash flows, which in turn reduces the business valuation.

There are also situations in which a business appears to have unusually *low* business risk in comparison to its competitors. For example, it may have:

- A strong management team that has been with the company for a long time, and has a history of effectively guiding the organization.
- A strong research and development group that has a proven history of producing revenue-generating products.
- Financial results that have consistently exceeded those of competitors, as well as a stable balance sheet.
- A large share of the market that encompasses the most profitable group of customers.

When a business has one or more of these stellar characteristics, it could justify a reduction in the discount rate being applied to its cash flows, which results in a higher present value of future cash flows, and therefore a higher valuation.

### **Adjusting Factors**

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There are many adjusting factors that may be used to alter the amount of a valuation. These factors are usually “soft,” which means that it can be difficult to assign a value to them. Instead, it may be necessary to estimate a high-low range for each one. Here are examples of adjusting factors:

#### Employee Factors

- Management and employee knowledge level
- Employee turnover
- Quality of key employees
- Quality of training programs

#### Sales and Marketing

- Brand recognition
- Quality and funding of marketing campaigns
- Number and quality of sales channels
- Level of control over sales channels
- Customer loyalty
- Size of market share
- Concentration of sales with a few customers
- Duration of customer contracts

## Additional Valuation Topics

### Products

- Quality of product pipeline
- Well-differentiated products and services
- Diversity of products and services offered
- Life cycle of products
- Patent protection of products
- Quality of field service support

### Production

- Use of lean production systems
- Quality level of goods produced
- Maintenance level and age of equipment

### Industry

- Barriers to entry
- Level of pricing competition
- Industry growth rate
- Ability to protect a specific industry niche
- Presence of potential competitors who could enter the market
- Impact of general economic factors on the industry

### Business Partners

- The ability of suppliers to raise prices
- The ability of customers to reduce prices

### Government

- Special taxes that impact the business
- Regulations that impact the business

### Other

- Strength of intangible assets
- Strength of internal controls

The presence of multiple favorable attributes from the preceding list could trigger a notable increase in a valuation, while their absence could have the reverse impact.

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### **EXAMPLE**

A government contractor depends on its connections within various government agencies to obtain information technology (IT) contracts. Each contract has a term of one year, and is not renewable. The short-term nature of these contracts is considered a negative adjusting factor. However, the management team has many connections within the government, which is considered a positive adjusting factor. Also, employees are highly-trained in IT, which is considered a positive adjusting factor. A downside of the last point is that the labor market for IT workers is extremely tight, which will likely lead to an increase in employee compensation. This is considered a negative adjusting factor.

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## Multiples Using Seller’s Discretionary Earnings

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In a smaller business, there may be a number of expenses or one-time events that cause profits as a percentage of sales to be substantially different from what might be expected in a larger firm, where these items constitute a smaller proportion of profits. When a profit multiplier is used to derive a company valuation, these expenses and one-time events can significantly alter the amount of the valuation. To create a more accurate valuation, a smaller organization might calculate *seller’s discretionary earnings* before applying a valuation multiplier.

Seller’s discretionary earnings (SDE) adjusts profits for the following items, after which an SDE-specific multiplier is used to derive a valuation. The adjustments are noted in the following table.

### Calculation of Seller’s Discretionary Earnings

+	Net income
+	Non-recurring expenses
-	Non-recurring income
+	Non-operating expenses
-	Non-operating income
+	Depreciation and amortization
+	Interest expense
+	Total compensation of one owner
=	Seller’s discretionary earnings

The intent behind these many adjustments is to arrive at a profit figure that a new owner can expect to earn. The adjustments are designed to strip away one-time events, as well as non-business activities that the current owner may be running through the business. In addition, the compensation of one owner is eliminated, on the grounds that this person’s efforts are not needed to run the business subsequent to a buyout. If this is not the case, then the compensation of a replacement must be added back to the SDE figure.

## The Earnout

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A significant problem for an acquirer is a seller that insists upon a valuation that is based on future expectations for the business. For example, a target company may be “just a few months” away from landing a major new contract, or launching a new product, or opening up a new distribution channel. The seller may believe that these prospective changes will have immense value, while the acquirer rightfully feels that these future prospects are entirely unproven, and may never occur or generate additional cash flow. These differences of opinion can cause major differences in the assumed valuation of a business.

When future expectations are causing a difference of opinion regarding valuation, one solution is to put off the acquisition until such time as the projected change has occurred, and its impact appears in the financial statements. However, these changes may take months or years to be completed, and may never occur at all. If so, the two entities are never able to close an acquisition deal.

An alternative that bridges the valuation gap between the two parties is the earnout. An earnout is a payment arrangement under which the shareholders of a target company are paid an additional amount if the company can achieve specific performance targets after the acquisition has been completed. It has the following advantages:

- *Payment source.* The improvements generated by the target company will likely generate sufficient cash flow to pay for all or a portion of the earnout, so the acquirer may be cash flow neutral on the additional payment.



## Additional Valuation Topics

- *Target achievement.* The shareholders of the target company will push for completion of the performance targets, so that the acquirer pays the earnout. This helps the acquirer, too (despite having to pay the earnout), since the results of the target company will have been improved.
- *Tax deferral.* The shareholders of the target company will be paid at a later date, after the earnout is achieved, which means that the income tax related to the earnout payment is also deferred for the payment recipients.

Despite these advantages, an earnout is generally not a good idea. The trouble is that, even after purchasing it, the acquirer must leave the target company as a separate operating unit, so that the target's management group has a chance to achieve the earnout. Otherwise, there is a risk of a lawsuit in which there is a complaint that the acquirer's subsequent actions to merge the acquiree into the rest of the company impair any chance of completing the earnout conditions. It is risky for the acquirer to leave a newly acquired company alone in this manner, since doing so means that it cannot engage in any synergistic activities designed to pay for the cost of the acquisition – such as terminating duplicate positions or merging the entire business into another part of the acquirer.

Further, the management of the acquired business will be so focused on achieving the earnout that they ignore other initiatives being demanded by the acquirer – and the acquirer may not be able to fire them for insubordination until the earnout period has been completed. Also, the management team will have a strong incentive to achieve the earnout, which can trigger fraudulent financial reporting practices. In short, agreeing to an earnout clause subjects the acquirer to an uncomfortable period when it cannot achieve its own goals for the target company and must watch out for incorrect financial reporting.

**Acquisition story:** A small company was acquired by a large consumer products company, and the management team was offered an earnout payment if a certain target profit could be reached in the following year. The profit figure had to be audited before the consumer products company would issue the earnout payment. The auditors reported finding a startling number of “errors” in the financial records that year, all of which enhanced the reported profitability of the business.

This does not mean that earnouts are impossible, only that they should be very strictly defined. Here are several tips for mitigating the issues associated with them:

- *Earnout period.* Keep the period over which the earnout can be earned as short as possible, so that the acquirer does not have to wait too long to enact its own synergy-related changes.
- *Continual monitoring.* Have a performance tracking system in place that keeps all parties aware of the progress toward the earnout goal, so that no one is surprised if the goal is not reached. This lessens the risk of a lawsuit, since expectations were managed.
- *Sliding scale.* Pay the earnout on a sliding scale. For example, if a target company achieves 80% of the target, it is paid 80% of the earnout. This is much better than a fixed target, where no bonus is paid unless an exact profit figure is achieved. In the latter case, the shareholders of the target company are much more likely to initiate a lawsuit, since they are not paid at all even if there is only a slight performance shortfall.

In summary, earnouts appear to present a neat solution for acquirers that have a substantial gap in valuation perception with their targets, but this solution can be a thorny one. There are ways to mitigate the risk, but the acquirer needs to be willing to pay out the full amount of an earnout, just to avoid lawsuits claiming that it impeded the actions of the target company in trying to achieve its earnout goals.

### Valuation Mistakes

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Given the broad range of possible valuation techniques available and the many adjustment factors involved, there is a substantial risk that a valuation will be incorrectly derived. Here are some of the more common valuation mistakes that can be made:

- *Wrong method.* Perhaps the most critical mistake is relying upon a single valuation technique, and especially one that does not adequately address the fundamentals of the business. For example, if a business has large amounts of intellectual property, the valuation method should take this type of intangible asset into account – which means not using methods that ignore intangible assets, such as book value or liquidation value.
- *Financials not adjusted.* The financial statements must be adjusted to eliminate one-time events that are skewing company results, as well as other adjustments that a buyer will likely make on a go-forward basis, such as altering employee compensation levels. If these adjustments are not made, then any valuation based on projected income or cash flows will be incorrect.
- *Incorrect comparisons.* A valuation may focus on the market approach, where the valuation of a business is derived from a comparison with other companies. The result can be wildly inaccurate if the sizes and tradability of the entities are different. For example, the valuation of a small business with \$500,000 of sales should not be derived from the recent sale price of a \$1 billion publicly-held company. In this case, the comparison entity has many more competitive advantages than the small business, such as more products, robust finances, and broad brand recognition.
- *Growth projections beyond available capital.* A discounted cash flows analysis may include a notable spike in profits in future years, which translates into an increase in valuation. The trouble with including such a spike in the DCF model is that it may exceed the ability of the business to obtain the necessary supporting funds. For example, a projected tripling of sales may require a similar increase in working capital funding, which may not be available. To reduce the risk of this issue occurring, include a balance sheet in the analysis, which reveals the amount of additional capital required.
- *Growth projections are extrapolations.* In a DCF analysis, cash flows are usually projected for at least five years into the future. If these projections are simply extrapolations of past results, there is no accounting for the impact of bottlenecks, competitor reactions, reaching maximum possible market share, and so forth. A common result of using extrapolations is that cash flow projections are too high.
- *Mismatched time periods.* When using a market method, the time period over which information is collected for the comparison businesses should match the time period for the entity being valued. If this is not the case, then the market information for the comparison businesses may be based on a different part of the economic cycle than the information collected for the subject company. For example, if the market comparison information was collected at the top of a business cycle and the related information for the subject company was collected a few months later during an industry slide, the resulting valuation could be much too high.

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#### EXAMPLE

The management of Capitalist Lending wants to develop a valuation figure for their company, using as a comparison the market values of a number of competitors that are publicly-held. The comparison is based on the year-end Form 10-K financial reports of these comparison companies, all of which are available in March. The comparison multiples are then applied to Capitalist's financial results as of the end of the first quarter of the year, so that the information for comparison entities is as of the end of December, and the information for Capitalist is three months later. If there had been a serious decline in the lending market during this three-month period, the comparison information provided by the 10-K reports may no longer be applicable to Capitalist's valuation calculation.

### Rules of Thumb

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Throughout this course, we have noted the use of valuation methods that are designed to use different data sets to arrive at a valuation. These valuations can vary from each other by significant amounts. When faced with a number of valuations that are not clustered around a clear midpoint, it can be useful to access a rule of thumb for the applicable industry in regard to what a typical valuation should be. A rule of thumb is a general principle regarded as roughly correct but not intended to be scientifically accurate. The most recent annual edition of the Business Reference Guide (located at [businessreferenceguide.com](http://businessreferenceguide.com)) contains rule of thumb pricing guidelines for more than 700 types of businesses. The Guide lists valuation multiples based on both sales and earnings, from which any debt carried by a business must be subtracted.

Barring the presence of unusual factors, the valuation of a business will probably not vary excessively from the most applicable rule of thumb multiples. However, this does not mean that one should entirely rely upon a rule of thumb to generate a valuation for a business. There are certainly outlier valuations that have been achieved, and there are many entity-specific adjustments that have the potential to result in a significantly different valuation.

**Note:** A rule of thumb valuation is specific to a type of business, but not to a specific location. Location can be a critical variable in a valuation, especially in retail environments where a prime location can greatly boost customer traffic.

### Summary

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In this chapter, the emphasis has been on two points. First, a large part of the value of a business may be contained within its intangible assets, which can be ignored or downplayed by some valuation methods. Instead, pay particular attention to the identification of these assets, and be willing to use several valuation methods to gain a reasonable idea of their value. Second, there are many adjustments that should be made to the initial valuation figure derived from the classic valuation methods. Spend considerable time evaluating how these negative and positive adjustments will impact the final valuation of a business. Only by paying attention to these additional valuation topics will it be possible to present a robust case for a particular valuation number.

## Review Questions

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7. The following is a factor that can impact business risk:
  - a. The amount of government regulation
  - b. The mix of employees used on the production line
  - c. The speed with which invoices are sent to customers
  - d. The bank account structure used to aggregate cash flows for investment purposes
  
8. An example of a sales and marketing valuation adjusting factor is:
  - a. Quality of key employees
  - b. Regulations that impact the business
  - c. Quality of training programs
  - d. Duration of customer contracts
  
9. An earnout is:
  - a. Always paid in stock
  - b. Used in situations where the buyer and seller have different expectations about the future results of a business
  - c. Essentially a retention bonus
  - d. A compensation method that rarely causes disputes

# Answers to Course Questions

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## Chapter 1 – Business Valuation

1. The \_\_\_ approach to valuation compares the cash flows of a business to those of other businesses that have sold recently.
  - a. Income
  - b. Market
  - c. Asset
  - d. Seller's discretionary earnings  
  - a. Incorrect. The income approach bases valuation on the future cash flows expected to be generated by a business.
  - b. **Correct. The market approach compares the revenues, income, or cash flows of a business to those of other businesses that have sold recently.**
  - c. Incorrect. The asset approach bases valuation on the fair values of all assets and liabilities held by a business.
  - d. Incorrect. The seller's discretionary earnings method adjusts the income of a business to reflect the valuation for which a buyer might pay.
  
2. If the assets of a business were to be theoretically sold off, this is known as:
  - a. Book value
  - b. Enterprise value
  - c. Liquidation value
  - d. Discounted cash flows value  
  - a. Incorrect. Book value is the amount at which assets and liabilities are recorded on the books of the company.
  - b. Incorrect. Enterprise value is the market value of all shares outstanding, plus total debt outstanding, minus cash.
  - c. **Correct. If the assets of a business were theoretically to be sold off, this is known as liquidation value. It produces the lowest valuation for a business.**
  - d. Incorrect. Discounted cash flows are the future cash flow of a business, discounted to the current period.
  
3. One way for the seller of a real estate-heavy business to optimize its sale price is to:
  - a. Only market the business to bidders with experience in real estate
  - b. Sell the real estate itself to maximize prices and then buy back shares
  - c. Insist on prices being derived from the discounted cash flows method
  - d. Borrow money and issue a large dividend to shareholders  
  - a. Incorrect. A bidder knowledgeable in real estate may not necessarily offer the highest price.
  - b. **Correct. The seller of a real estate-heavy business could sell the real estate itself as market trends allow, and use the cash to buy back shares.**
  - c. Incorrect. The discounted cash flows method will not necessarily result in the highest price.
  - d. Incorrect. Borrowing money for a dividend does not necessarily generate the best return for investors.

## Answers to Course Questions

4. The use of forward EBITDA multiples:
- a. Tends to incorporate conservative estimates
  - b. Is used when future results appear to be uncertain
  - c. Tends to yield low valuations
  - d. Makes sense when future results are expected to be better than trailing results
- a. Incorrect. Forward EBITDA tends to incorporate optimistic estimates.  
b. Incorrect. Forward EBITDA is used when there is a strong certainty regarding the outcome.  
c. Incorrect. Forward EBITDA tends to yield high valuations.  
d. **Correct. Forward EBITDA makes sense when future results are expected to be better than trailing results. This approach incorporates estimates of future performance.**
5. A key flaw in the capitalization model is:
- a. The use of an adjusted return
  - b. The use of a discount rate
  - c. Its basis in just a single year of results
  - d. In situations where the adjusted return is expected to be relatively stable
- a. Incorrect. The return generated by a business must be adjusted, to eliminate any one-time events.  
b. Incorrect. A discount rate is needed to create a capitalization rate, which in turn converts earnings into a valuation.  
c. **Correct. Any one year of results may differ from the long-run trend of earnings or cash flows, and so is less likely to yield a valid valuation.**  
d. Incorrect. When the adjusted return is expected to be relatively stable, the use of a single year of results can be used to derive a reasonably accurate valuation.
6. The following are reasons for the lack of marketability discount, except for:
- a. Lenders do not like to accept private company shares as collateral
  - b. There are fewer investors willing to buy private company shares
  - c. Private company shares do not trade on a stock exchange
  - d. The audited financial statements of private companies are less reliable than those of public companies
- a. Incorrect. Investors know that lenders do not want to accept restricted shares as collateral, and so are less willing to acquire these types of shares.  
b. Incorrect. There are fewer investors willing to acquire private company shares, since it is so difficult to re-sell the shares.  
c. Incorrect. Only the shares of publicly-held entities sell on stock exchanges.  
d. **Correct. As long as auditing standards are properly followed, the financial statements of private and public companies should fairly state their financial results, financial positions, and cash flows.**

**Chapter 2 – Additional Valuation Topics**

7. The following is a factor that can impact business risk:
- The amount of government regulation
  - The mix of employees used on the production line
  - The speed with which invoices are sent to customers
  - The bank account structure used to aggregate cash flows for investment purposes
- a. **Correct. A new or existing government regulation could potentially put a company out of business, or at least impose significant new costs on it.**
- b. Incorrect. The mix of employees used on a production line can generate a direct labor variance, but this typically does not have a notable impact on financial results.
- c. Incorrect. Small variations in the speed of invoice transmission will not significantly alter the financial results of a business.
- d. Incorrect. The use of a cash concentration system will improve the amount of investment income, but does not impose a business risk.
8. An example of a sales and marketing valuation adjusting factor is:
- Quality of key employees
  - Regulations that impact the business
  - Quality of training programs
  - Duration of customer contracts
- a. Incorrect. The quality of key employees is certainly an adjusting factor, but it falls within the employees classification, not sales and marketing.
- b. Incorrect. The presence of regulations can impact the valuation of a business, but regulations are considered to be within the government adjusting factors classification.
- c. Incorrect. The quality of an entity's training programs can be an adjusting factor in some industries, especially service industries. However, this is considered an employee-related factor, not a sales and marketing factor.
- d. **Correct. The duration of customer contracts can be a major adjusting factor in industries where sales are closely tied to customer contracts.**
9. An earnout is:
- Always paid in stock
  - Used in situations where the buyer and seller have different expectations about the future results of a business
  - Essentially a retention bonus
  - A compensation method that rarely causes disputes
- a. Incorrect. Earnouts can be paid in any form – stock, debt, or cash.
- b. **Correct. An earnout is used in situations where the buyer and seller have different expectations about the future results of a business. The seller can earn an additional payout if subsequent earnings targets of the seller are met or exceeded.**
- c. Incorrect. A retention bonus is paid to someone to remain on the job for a certain period of time, whereas an earnout is paid based on the future performance of a business.
- d. Incorrect. Earnouts are difficult to measure, and so continually cause disputes.

# Glossary

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## **B**

*Book value.* An asset's original cost, less any accumulated depreciation and impairment charges that have been subsequently incurred.

*Business risk.* The possibility that an organization's operations or competitive environment will cause it to generate financial results that are worse than expected.

## **C**

*Comparison analysis.* The derivation of the value of a business by comparing it to similar acquisition transactions that were completed recently.

*Control premium.* The additional value associated with shares that will give the purchaser control over a business.

*Cost of capital.* The cost of the debt and equity used by a business. It is comprised of debt, preferred stock, and common stock.

## **D**

*Discounted cash flows.* A valuation method under which the future expected cash flows of a business are discounted to their present value.

## **E**

*Earnout.* An additional payment made to the shareholders of an acquired company if it can meet certain performance objectives.

*EBITDA.* Earnings before interest, taxes, depreciation, and amortization. It is a rough measure of the cash flows of a business.

*Enterprise value.* The market value of the shares of a business, plus its outstanding debt, less its cash balance.

## **F**

*Forward EBITDA.* The use of projected EBITDA information for the next 12 months to derive the valuation of a business.

*Forward revenue.* The use of projected revenue information for the next 12 months to derive the valuation of a business.

## **G**

*Going concern.* The expectation that a business will continue in operation for the foreseeable future.

## **I**

*IPO valuation.* The derivation of a company's valuation by initiating the process of taking the company public and determining the price at which its shares are expected to sell.

## **L**

*Lack of control.* The inability to control the operating decisions of a business.

*Lack of marketability.* The inability to sell the shares of a business.



## Glossary

*Liquidation value.* The amount of funds that would be collected if all assets and liabilities of a company were sold off or settled.

### **P**

*Price.* The amount paid by the buyer to the seller in exchange for ownership of a business.

### **R**

*Relief-from-royalty method.* The assignment of value to an intangible asset, based on the royalty that would have been paid for the rights to use the asset if it were licensed from a third party.

*Replication value.* A valuation technique that involves estimating the cost to replicate a target company.

*Rule of thumb.* A general principle regarded as roughly correct but not intended to be scientifically accurate.

### **S**

*Strategic purchase.* The purchase of a business for strategic reasons, rather than being based on a more quantitative valuation model.

### **T**

*Trailing EBITDA.* The use of historical EBITDA information for the last 12 months to derive the valuation of a business.

*Trailing revenue.* The use of historical revenue information for the last 12 months to derive the valuation of a business.

### **V**

*Value.* What the buyer of a business receives.

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