



Understanding Business Valuation

A Practical Guide to Valuing Small
to Medium Sized Businesses

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Chapter 6

Data Analysis

Learning Objectives

In this chapter, I will attempt to explain what to do with all the data that should have been collected in the previous chapter. This will include a discussion about how to use the data, as well as what it means. Therefore, in this chapter, I will discuss the following:

- Economic analysis
- Industry analysis
- Subject company analysis
- Financial analysis
- Financial statement adjustments

Introduction

Data analysis is an important component of the valuation process. Because assessment of risk is a goal of the valuation analyst, the analysis of the information collected must be performed with a view toward the future of the business. In general, we feel more comfortable using historical information for a valuation, but we have to remember that a willing buyer is not interested in buying history. As valuation analysts, it is our role to assess how much the future will resemble the past. To the extent the past resembles the future, and to that extent the past is predictive of the future, only then can we value the business.

Economic Analysis

Revenue Ruling 59-60 tells us to consider "the economic outlook in general and the condition and outlook of the specific industry in particular." During the analysis of the economy, the valuation analyst attempts to determine the economic risks associated with the subject business. Questions regarding the demand for the company's goods or services and the sources of supply are frequently asked. The outlook for the general economic trends that might affect supply and demand for the company's goods and services should be thoroughly investigated. This analysis must be relevant to the valuation subject, not just taken from a boilerplate. For example, if the valuation subject is a construction company, economic factors such as interest rates, housing starts, and building permits may be important. How important are they if the valuation subject is a cardiovascular surgery practice?

Another component of the economy that should be considered by the valuation analyst is where in the economic cycle the valuation subject is at the date of the valuation. If the economy is in a recession, it will make a big difference whether the recession is just starting or is about to end. Depending upon where the company is in the economic cycle, the short-term and long-term projections may be radically different. Because valuation is a prophecy of the future, this would be extremely important to the willing buyer because he or she would have to ride out the balance of the cycle.

The economic analysis will be used in at least two sections of the valuation assignment: in forecasting the future performance of the subject company and to aid the valuation analyst in performing an analysis of the economic risk to which the company is exposed. This will be one of the many considerations in the determination of (1) the pricing multiples used in the market approach and (2) the discount or capitalization rates used in the income approach.

During the management interview, the valuation analyst will want to ask company representatives about how the economy affects the business. Some businesses are cyclical with the economy, and others may be counter-cyclical; these businesses react opposite to the economy. An example of one such business is a tractor trailer driving school. When the economy is strong, business is bad. When the economy is weak, business is good. Why? During a good economy, people are working, and they are not necessarily looking to be retrained in a new field. During a bad economy, economic layoffs require people to find new employment. The issues for the valuation analyst to consider about training schools are as follows: Is funding available for the students (if they are unemployed, they may not want to or be able to spend \$2,000+ for education), and after the students complete the course, will the economy turn around so that drivers will be needed? Exhibit 6.1 gives an illustration of a sample economic section from a real report.

Let me point out a few things to you about the exhibit. First, if you'll notice, we footnote our sources. Also, in this valuation, the local economy mattered as well, so we covered the parts of the state that we considered to be important to the valuation subject. This business was also affected by the demographics of the region, particularly because it provided certain types of health care.

EXHIBIT 6.1 Economy Section

Generally, business performance varies in relationship to the economy. Just as a strong economy can improve overall business performance and value, a declining economy can have the opposite effect. Businesses can be affected by global, national, and local events. Changes in regulatory environments, political climate, and market and competitive forces can also have a significant impact on business. For these reasons, it is important to analyze and understand the prevailing economic environment when valuing a closely held business. Because the valuation process is a "prophecy of the future," it is imperative that the valuation analyst review the economic outlook because it would affect the valuation subject.

NATIONAL ECONOMY

After a weak first quarter affected by the winter, real gross domestic product (GDP) increased by 3.9 percent in the second quarter of 2015. Non-farm payroll employment rose only 142,000 in September 2015 and the unemployment rate has steadily declined from 6.1 percent in the third quarter of 2014 to 5.2 percent in the third quarter of 2015.¹ On October 12, 2015, a panel of prominent United States economic and financial forecasters were surveyed by Consensus Economics, Inc. for their predictions on a range of key economic variables. These forecasts are summarized in table 1.

¹ Consensus Forecasts—USA, October 12, 2015.

EXHIBIT 6.1 Economy Section**TABLE 1 Quarterly Forecasts**

	2015		2016				2017	
	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.
Real Gross Domestic Product*	2.0	2.7	2.6	2.7	2.6	2.6	2.6	2.5
Nominal Gross Domestic Product*	3.8	4.1	4.3	4.7	4.5	4.6	4.9	4.7
Real Disposable Personal Income*	3.1	3.2	2.7	2.5	2.7	2.7	3.0	2.8
Real Personal Consumption*	3.4	2.9	2.8	2.8	2.8	2.7	2.8	2.6
Real Business Investment*	5.0	4.6	4.6	4.8	4.7	4.8	4.9	4.9
Industrial Production*	2.1	1.9	2.5	2.6	2.7	2.7	2.9	3.0
Consumer Prices*	1.9	1.0	2.0	2.3	2.3	2.4	2.2	2.3
Producer Prices*	2.1	0.2	1.9	2.4	2.3	2.3	2.1	2.6
Unemployment Rate, %	5.2	5.1	5.0	4.9	4.8	4.7	4.8	4.8
3 Month Treasury Bill Rate, % ¹	0.0	0.2	0.4	0.6	0.8	1.0	1.3	1.5
10 year Treasury Bond Yield, % ¹	2.0	2.3	2.4	2.6	2.7	2.8	3.0	3.2

* % change from prior quarter, seasonally adjusted annual rate.

¹ End Quarter.

(Source: Consensus Forecasts—USA, October, 2015: 5, Consensus Economics Inc.)

Consensus Economics' forecasts indicate a steady economy over the next several quarters with GDP, disposable income, and personal consumption remaining relatively unchanged. Furthermore, inflation is forecast to remain soft while the unemployment rate is expected to continue to improve. These factors indicate that The Company will be operating in a stable economy in the near term.

REGIONAL ECONOMY

The Company is located in XYZ, Florida. XYZ is a town located in Central Florida in Sumter County. The Company's patient base is primarily in Sumter County, along with neighboring Lake County. It is important to understand the economic climate in this area in order to assess The Company's future prospects.

As of 2014, Sumter County and Lake County had populations of 111,125 and 309,736, respectively. Historic population estimates and future projections for these counties and the State of Florida are presented in table 2.

(continued)

EXHIBIT 6.1 Economy Section *(continued)*
TABLE 2 Population Projections

Projections									
County and State	Age Bracket	Estimates 2014	2015	2020	2025	2030	2035	2040	CAGR¹
Lake									
	Total	309,736	317,239	356,555	395,286	432,620	466,378	497,345	1.8%
	0 - 4	16,478	16,781	18,010	20,151	21,610	23,627	24,345	1.5%
	5 - 17	45,499	46,168	50,457	52,228	56,861	60,577	66,134	1.4%
	18 - 24	22,908	23,994	24,374	28,880	27,595	30,004	30,162	0.9%
	25 - 54	104,396	106,000	113,499	124,288	134,989	149,439	158,855	1.6%
	55 - 64	44,016	45,733	53,965	58,851	57,047	57,495	57,971	1.0%
	65 - 79	55,669	57,056	72,185	80,800	99,677	102,888	111,481	2.7%
	80 +	20,770	21,597	24,065	30,088	34,841	42,348	48,397	3.3%
Sumter									
	Total	111,125	117,095	141,440	165,195	188,224	210,780	232,488	2.8%
	0 - 4	2,708	2,856	3,383	4,218	4,818	5,892	6,433	3.3%
	5 - 17	6,972	7,243	8,648	10,449	12,546	14,707	17,162	3.5%
	18 - 24	4,275	4,529	4,855	5,981	6,544	7,978	8,955	2.8%
	25 - 54	25,731	26,849	28,789	35,642	39,365	48,393	52,947	2.8%
	55 - 64	17,538	17,564	17,468	21,887	22,815	27,731	30,423	2.2%
	65 - 79	44,849	48,208	59,316	57,648	57,425	58,777	68,221	1.4%
	80 +	9,052	9,846	18,981	29,370	44,711	47,302	48,347	6.6%

55 - 64	17,538	17,504	17,468	17,432	17,396	17,360	17,324	17,288	1.4%
65 - 79	44,849	48,208	59,316	57,648	57,425	58,777	68,221		
80 +	9,052	9,846	18,981	29,370	44,711	47,302	48,347		6.6%

EXHIBIT 6.1 Economy Section

TABLE 2 Population Projections

Projections									
County and State	Age Bracket	Estimates 2014	2015	2020	2025	2030	2035	2040	CAGR¹
Florida									
	Total	19,507,369	19,789,625	21,236,667	22,600,346	23,872,566	25,027,345	26,081,392	1.1%
	0 - 4	1,096,571	1,108,916	1,163,815	1,240,015	1,287,190	1,343,696	1,370,468	0.9%
	5 - 17	2,962,179	2,987,890	3,120,483	3,247,375	3,377,536	3,562,796	3,699,109	0.9%
	18 - 24	1,792,289	1,816,290	1,810,880	1,947,698	1,968,570	2,025,135	2,098,871	0.6%
	25 - 54	7,478,872	7,522,359	7,761,832	8,113,990	8,545,601	9,075,392	9,421,372	0.9%
	55 - 64	2,546,741	2,611,938	2,914,488	2,920,366	2,754,176	2,719,302	2,848,950	0.3%
	65 - 79	2,608,136	2,688,217	3,287,648	3,697,106	4,223,974	4,250,322	4,314,163	1.9%
	80 +	1,022,581	1,054,015	1,177,521	1,433,796	1,715,519	2,050,702	2,328,459	3.2%

¹ Consensus Forecasts—USA, October 12, 2015.

(Source: Florida Population Studies, Bulletin 172, Bureau of Economic and Business Research.)

(continued)

EXHIBIT 6.1 Economy Section *(continued)*

Population in the area surrounding The Company is forecast to outpace the state as a whole. The fastest growing age bracket is 80 and over, which is forecast to increase by 3.3 percent and 6.6 percent per year in Lake and Sumter County, respectively. In Lake County, significant growth is also expected in the 65–79 age bracket which is forecast to increase by 2.7 percent per year. Sumter County is projected to experience faster growth in the younger age brackets, outpacing the State of Florida.

Medicare beneficiaries make up a significant portion of the population in Lake and Sumter Counties. This data is presented in Table 3.

TABLE 3 Medicare Beneficiaries as a Percentage of Total Population

	Medicare Beneficiaries	Population	Beneficiaries as a % of Population
Lake County	86,502	309,736	27.9%
Sumter County	52,142	111,125	46.9%
Florida	4,386,134	19,507,369	22.5%

(Source: Center for Medicare and Medicaid Services.)

Medicare beneficiaries make up 46.9 percent of Sumter County's population which is more than double the state's overall. A significant portion of Lake County's population also consists of Medicare beneficiaries.

The Company's patient base is primarily located towards The Villages, an unincorporated community of 107,056 residents. According to U.S. census data, The Villages, Florida's largest retirement community, is also the nation's fastest growing metropolitan area. Much of The Village's recent growth has been in Sumter County, where it has expanded into the city limits of Wildwood and built its newest town center. The Villages' pace of growth has not resulted in an overcrowding of the community as each residential development gets its own golf courses, pools, restaurants and other amenities²

Unemployment rates in Sumter and Lake County have decreased but still exceed national and statewide levels. Employment data for the local area, the State of Florida and the United States are summarized in Table 4.

In Sumter County, the labor market continued to increase in 2014 as total employment increased to 26,120. Although the unemployment rate decreased from 13.3 percent in 2010 to 7.7 percent in 2014, it remained well above national and state levels. In Lake County, the labor market has increased from 2010 to 2014 as total employment increased from 118,246 to 130,439 and the unemployment rate has steadily decreased from 11.8 to 6.4 percent.

² Jeff Kuerth, "The Villages: Retirement Community is Nation's Fastest-Growing Metro Area," *Orlando Sentinel*, March 27, 2014 <articles.orlandosentinel.com/2014-03-27/news/os-villages-fastest-growing-census-20140325_1_the-villages-elaine-dreidame-mayor-ed-wolf> (accessed December 21, 2015).

EXHIBIT 6.1 Economy Section

TABLE 4 Employment Data

	Sumter County		Lake County		Florida		United States	
	Employment	Unemployment Rate	Employment	Unemployment Rate	Employment	Unemployment Rate	Employment	Unemployment Rate
2010	21,955	13.3%	118,246	11.8%	8,194,000	11.1%	139,064,000	9.6%
2011	22,866	12.1%	119,616	10.6%	8,372,000	10.0%	139,869,000	8.9%
2012	24,035	10.3%	122,238	8.9%	8,595,000	8.5%	142,469,000	8.1%
2013	25,054	8.9%	125,613	7.5%	8,783,000	7.3%	143,929,000	7.4%
2014	26,120	7.7%	130,439	6.4%	9,034,000	6.3%	146,305,000	6.2%

(Source: Floridajobs.org.)

(continued)

EXHIBIT 6.1 Economy Section *(continued)*

Income levels in the local area have consistently lagged those of the rest of the state. Per capita personal income for Sumter County, Lake County and the State of Florida is presented in Table 5.

TABLE 5 Income Data

	2010	2011	2012	2013	2014
Sumter	\$29,191	\$32,930	\$35,300	\$36,481	\$37,558
Lake	32,253	33,239	33,946	34,637	35,786
Florida	38,718	40,538	41,249	41,309	42,737

(Source: Bureau of Economic Analysis.)

Conditions in the local economy should have a positive impact on The Company. The older demographic within the region presents many opportunities for home health services and growth within the older age demographics is expected to experience significant growth over the long term. Furthermore, the large Medicare population within the area should continue to support strong demand for The Company's services within the region.

Industry Analysis

The purpose of the industry analysis is to allow a comparison of the valuation subject with the industry as a whole, as well as to allow the valuation analyst to use industry forecasts to help predict how the subject company will perform in the future. Box 6.1 includes questions frequently raised about the industry.

Porter's Five Forces

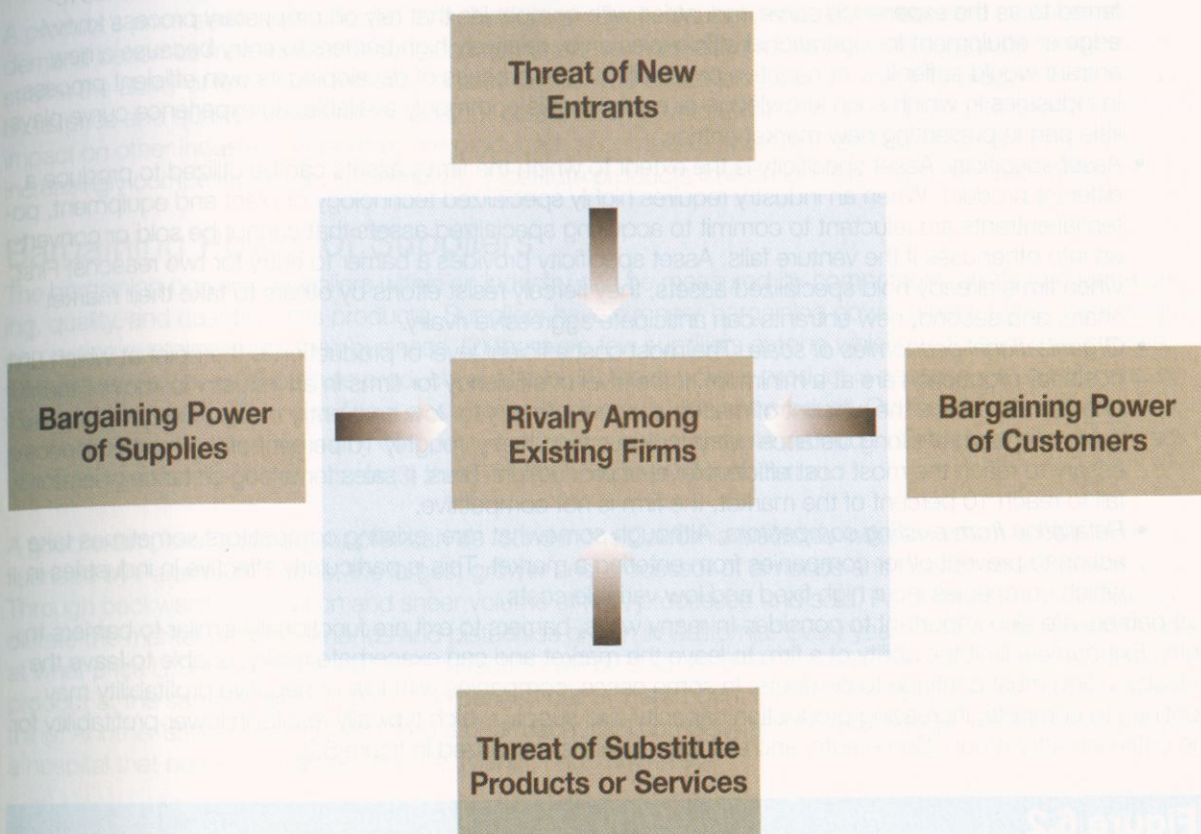
Many of the questions posed in box 6.1 can be answered through a structured analytical process called Porter's Five Forces that was developed by Michael Porter of the Harvard Business School in 1979. Porter has since published a number of articles about the Five Forces; the first was in 1980 in his book *Competitive Strategy: Techniques for Analyzing Industries and Competitors*. The key point of Porter's theory is that increased competition reduces profitability for an industry as a whole. For the business valuation analyst, Porter's Five Forces should allow you to identify key industry drivers and give you a general idea of how an industry's future may affect growth and profitability for the subject company. The basic structure of Porter's Five Forces is shown in figure 6.1. Each part of this figure deserves a discussion.

BOX 6.1

Frequently Asked Industry Questions

- Who makes up the industry? Are there many companies or are there very few companies that control everything?
- Is it a cyclical industry?
- Is it a new industry with many new companies entering it, or is it a mature industry that has reached its saturation point?
- What are the barriers to entry, if any, into the industry?
- Is this a self-contained industry, or is it dependent on another industry?
- Is the industry dependent on new technology? If so, is the valuation subject keeping up with the industry?
- Is the industry expected to change? If so, how will that affect the valuation subject?
- What is the forecast for growth within the industry?

Figure 6.1



Threat of New Entrants

The threat of new entrants is, in part, determined by market conditions. Factors affecting new market entrants include economies of scale, product differentiation, capital requirements, switching costs for customers, access to distribution channels, cost advantages, and government policies. Barriers to entry are unique characteristics that define an industry. They reduce the rate of entry for new firms, thus, maintaining a level of profitability for those already in the industry. Clearly, the more numerous and difficult the barriers are within an industry, the lower the number of competitors and vice versa. In many cases (but not all), industries with higher barriers to entry will be more profitable. From a strategic perspective, barriers can be created or exploited to enhance a firm's competitive advantage. Barriers to entry arise from several sources:

- **Capital requirements.** Industries that are capital intensive may require a substantial amount of financial capital to enter the market. The most broad and obvious example of a capital intensive industry is manufacturing. Manufacturers require substantial fixed asset investment in order to operate. Industries that require investment in brand name or research and development (R&D) are capital intensive as well due to the funds required to advertise or develop a new product. These types of industries usually have few alternative products and are dominated by a few competitors.
- **Government.** Although the principal role of the government in a market is to preserve competition through antitrust actions, government also restricts competition through the granting of monopolies and regulation. Industries, such as utilities, are considered natural monopolies because it has been more efficient to have one electric company provide power to a locality than to permit many electric companies to compete in a local market. To restrain utilities from exploiting this advantage, government permits a monopoly but regulates the industry. Illustrative of this kind of barrier to entry is the local cable company. The franchise to a cable provider may be granted by competitive bidding, but once the franchise is awarded by a community, a monopoly is created. Local governments were not effective in monitoring price gouging by cable operators, so the federal government has enacted legislation to review and restrict prices.

- *Patents and proprietary knowledge.* These serve to restrict entry into an industry. Ideas and knowledge that provide competitive advantages are treated as private property when patented, preventing others from using the knowledge and, thus, creating a barrier to entry. This factor is sometimes referred to as the *experience curve*. Industries with companies that rely on proprietary process knowledge or equipment for operational efficiencies enjoy relatively high barriers to entry because a new entrant would suffer low or negative profitability in the process of developing its own efficient process. In industries in which such knowledge or equipment is commonly available, an experience curve plays little part in preventing new market entries.
- *Asset specificity.* Asset specificity is the extent to which the firm's assets can be utilized to produce a different product. When an industry requires highly specialized technology or plant and equipment, potential entrants are reluctant to commit to acquiring specialized assets that cannot be sold or converted into other uses if the venture fails. Asset specificity provides a barrier to entry for two reasons: First, when firms already hold specialized assets, they fiercely resist efforts by others to take their market share, and second, new entrants can anticipate aggressive rivalry.
- *Organizational economies of scale.* The most cost efficient level of production is the point at which unit costs for production are at a minimum. If the level of efficiency for firms in an industry is known, then one can determine the amount of market share necessary for low cost entry or cost parity with rivals. For example, in the long distance communications industry, roughly 10 percent of the market is necessary to reach the most cost efficient level of production. Thus, if sales for a long distance operator fail to reach 10 percent of the market, the firm is not competitive.
- *Retaliation from existing competitors.* Although somewhat rare, existing competitors sometimes take action to prevent other companies from entering a market. This is particularly effective in industries in which companies incur high fixed and low variable costs.

Exit barriers are also important to consider. In many ways, barriers to exit are functionally similar to barriers to entry. Exit barriers limit the ability of a firm to leave the market and can exacerbate rivalry; unable to leave the industry, a firm must continue to compete. In some cases, companies with low or negative profitability may continue to compete, increasing production capacity and supply, which typically results in lower profitability for the entire industry group. Some entry and exit barriers are summarized in figure 6.2.

Figure 6.2

Easy to Enter if there is • common technology • little brand franchise • access to distribution channels • low scale threshold • low level of customer loyalty	Difficult to Enter if there is • patented or proprietary know-how • difficulty in brand switching • restricted distribution channels • high scale threshold • aggressive reaction from existing firms
Easy to Exit if there are • salable assets • low exit costs • independent businesses	Difficult to Exit if there are • specialized assets • high exit costs • interrelated businesses

Threat of Substitute Products or Services

In Porter's model, the term *substitute products* often refers to products in other industries. To the economist, a threat of substitutes exists when a product's demand is affected by the price change of a substitute product. To be clear, a substitute product is not necessarily the product of a direct competitor. Substitute products can be provided by a separate industry designed to meet the demand of the same group of customers. For

example, the introduction of online streaming of movies and television shows has provided a substitute product to cable service and video rental stores.

A product's price elasticity is affected by substitute products. As more substitutes become available, the demand becomes more elastic because customers have more alternatives. A close substitute product constrains the ability of firms in an industry to raise prices. The effectiveness of a substitute product is determined by its price and quality, as well as the cost for customers to switch to it. Substitute products have a significant impact on other industries when they are produced by companies with high profitability or are becoming increasingly competitive in price. Ultimately, substitute products limit an industry's potential profitability.

Bargaining Power of Suppliers

The bargaining power of suppliers within an industry can be measured by competitors' ability to change pricing, quality, and quantity of its products. Suppliers have stronger bargaining power when (1) they can integrate competing customers into their business, (2) there are few suppliers among which customers may choose, (3) there are few or no substitute products available, (4) the supplier's product is necessary to customers, or (5) customers would incur significant costs for switching to a different product. On the other hand, suppliers are weak when (1) there are many competitive suppliers and substitute products, (2) there is a threat of backwards integration by customers, or (3) there is high customer concentration.

A good example of a strong supplier can be found in the California pistachio industry, which is heavily influenced by Paramount Farms, the largest grower and processor of almonds and pistachios in the world. Through backwards integration and sheer volume of nuts processed and sold, Paramount Farms is able to dictate the market price of almonds and pistachios grown in California. Every year, Paramount Farms decides at what price U.S. grown almonds and pistachios will be sold. All other growers and processors must sell product at the same or similar cost or be pushed out by Paramount Farms. See? Being nuts can be a good thing! Another strong supplier would be a pharmaceutical company and its relationship with hospitals. Imagine a hospital that no longer wanted to carry Tylenol. I don't think so.

Bargaining Power of Customers

Depending on the industry, customers may have significant bargaining power with their suppliers. Customers with strong bargaining power are able to influence change in the pricing and quality of products from suppliers. Customers tend to have strong bargaining power in industries with a low number of customers relative to suppliers, little product differentiation, and the availability of substitute products. Customers in industries that generate low profitability generally have higher bargaining power because they tend to search for alternative products at the lowest prices possible. In addition, customers with a high volume of product purchases or the ability to acquire competing suppliers can have a very powerful influence over suppliers. Finally, customers with full information about products and the prices available in the market generally are able to bargain better with suppliers.

It goes without saying that customers have little negotiating power with suppliers when the opposite is true. When suppliers can threaten forward integration, there are significant customer switching costs, there are many customers to available suppliers, or there are few or no substitute products.

A good example of a customer with strong bargaining power is the U.S. government. The large number of government contractors results in high competition in all industries that rely on business from the federal government. This heightened level of competition allows the government to negotiate the best prices, many times, through a competitive bidding process among contractors. In theory, the government should be able to negotiate well. The political process is vulnerable to lobbying and subject to constituent influence. For example, labor unions have convinced many governmental bodies that prevailing union wage rates should be charged for all government contracts. This requirement limits the ability of a governmental unit to obtain the lowest possible price. In other situations, graft, political corruption, and many other factors that I am not going to go into in this book frequently cause the government to be ineffective in negotiations.

Competitive Rivalry Among Existing Firms

The four factors discussed in the preceding section all have a direct effect on the rivalry that exists between competitors. The number, relative size and diversity of competitors, industry growth, cost efficiencies, substitute products, cost to switch, and entry and exit barriers all have a direct impact on competitors within a given industry.

Firms within an industry may respond to rivalry by changing prices (raising or lowering prices to gain a temporary advantage), improving product differentiation (expanding features, implementing innovations in the manufacturing process and in the product itself), creatively using channels of distribution (vertical integration or using distribution channels novel to the industry), or exploiting relationships with suppliers with regard to quality, price, or volume. Rivalry is intensified when there are a large number of firms competing for the same customers and resources, market growth is slow, costs are relatively high among competitors, customer switching costs are low, and product differentiation is weak. All of these factors must be considered when analyzing any industry because they probably all have some effect on the company being valued.

Oftentimes, rivalry increases as one company attempts to take market share from its competitors. In some cases, attempts to gain market share can provoke competitors to follow suit. This type of industry-wide change (although good for customers) can hurt an industry. For example, a broad reduction in prices will decrease profitability for an industry as a whole. Although the largest competitors are able to absorb the negative effects of price increases through sales volume, smaller companies can be destroyed by it.

High exit barriers cause a firm to remain in an industry even when the venture is not profitable because there is a high cost to abandoning the product. A common exit barrier is asset specificity. When the plant and equipment required for manufacturing a product are highly specialized, these assets cannot easily be sold to other buyers in another industry.

Diversity of rivals with different cultures, histories, and philosophies makes an industry unstable. There is a greater possibility for mavericks and for misjudging rivals' moves. Rivalry is volatile and can be intense. The hospital industry, for example, is populated by facilities that (1) are community or charitable institutions, (2) are associated with religious organizations or universities, and (3) are for-profit enterprises. This mix of philosophies about mission has occasionally led to fierce local struggles by hospitals over which ones will get to deliver expensive diagnostic and therapeutic services. At other times, local hospitals are highly cooperative with one another on issues such as community disaster planning.

A growing market and the potential for high profits induce new firms to enter a market and incumbent firms to increase production. A point is reached at which the industry becomes crowded with competitors and demand cannot support new entrants and higher supply. The industry may become crowded if its growth rate slows and the market becomes saturated, creating a situation of excess capacity with too many goods and services chasing too few buyers. A shakeout ensues, with intense competition, price wars, and company failures. Additionally, market stability and changes in supply and demand affect rivalry. Cyclical demand tends to create cutthroat competition.

In bringing everything together, the best way to illustrate the use of Porter's Five Forces is to provide you with an example. In Porter's *On Competition*, an example of the application of the Five Forces theory is provided. Although the example isn't particularly deep in its analysis, it touches on all five industry forces to explain how Dr. Pepper was able to succeed in a market dominated by industry giants Coca-Cola and Pepsi Cola. You really should get this book so that you can read the example as well as the rest of it.

In assessing the outlook of a subject company, the analyst must consider what is happening in the company's industry. Porter's Five Forces provides a structured method to understanding the factors that drive a particular market. The analysis of the subject company and its industry will allow an analyst to assess its situation relative to its industry peers. This can be helpful when conducting a comparative financial analysis, selecting a discount rate for use with a discounted future benefits approach, and selecting market multiples based on publicly traded guideline companies. After completing a Porter's Five Forces analysis, you should have some idea about how an industry will react to a subject company's strategy. As an example, if the subject company is planning on entering an industry that has a history of dropping prices substantially upon the entry of a new

competitor, the risk of failure is higher and should be reflected in a higher discount rate or lower market multiple. However, always keep in mind that certain factors may be more important to your analysis than others depending on the nature of the business. For example, the bargaining power of The Home Depot or Lowes with their suppliers would not be comparable to the bargaining power of the local hardware store, which has no influence on an industry dominated by the two, billion dollar giants.

Porter's Five Forces has often been criticized for its simplistic nature. The methodology is difficult to apply in industries with high government regulation or industries with complex product interrelationships and strategic alliances among industry participants. Additionally, changes in business models due to drastic changes in technology are not considered by the Five Forces analysis. Nevertheless, Porter's Five Forces remains a good starting point for any industry analysis. It is also an excellent framework from which to present your analysis of the environment in which the subject company operates. Keep in mind that it is always important to consider the nuances of the particular industry with which you are dealing. In some cases, additional analysis will be necessary to account for all industry drivers.

Other Considerations

If an industry is cyclical, as are automobile dealerships, consideration should be given to where in the economic cycle the industry is. If the economy is at the bottom of the cycle, the forecast for the next several years may look good. This will affect the forecast of future operations, as well as the risk component of the market multiples, discount rates, or capitalization rates that will be used. It is also important to understand which economic factors affect the industry, and sometimes, the industry(s) of its customers. For example, what is the impact of rising interest rates for an automobile dealership? Sales and leasing may go down, so this is a bad thing. However, people will keep their cars longer, and the repair bays may get busier because the older cars need more maintenance. This is a good thing. However, interest rates may not have a significant effect on a high-end dealership (think Porsche, Mercedes-Benz, and the like). As an example, many of the customers for a Porsche dealership in the New York City metropolitan area pay cash for new cars after receiving their annual Wall Street bonuses. Thus, interest rates would not have as big an impact on new vehicle sales as would stock market performance. Don't be quick to jump to conclusions.

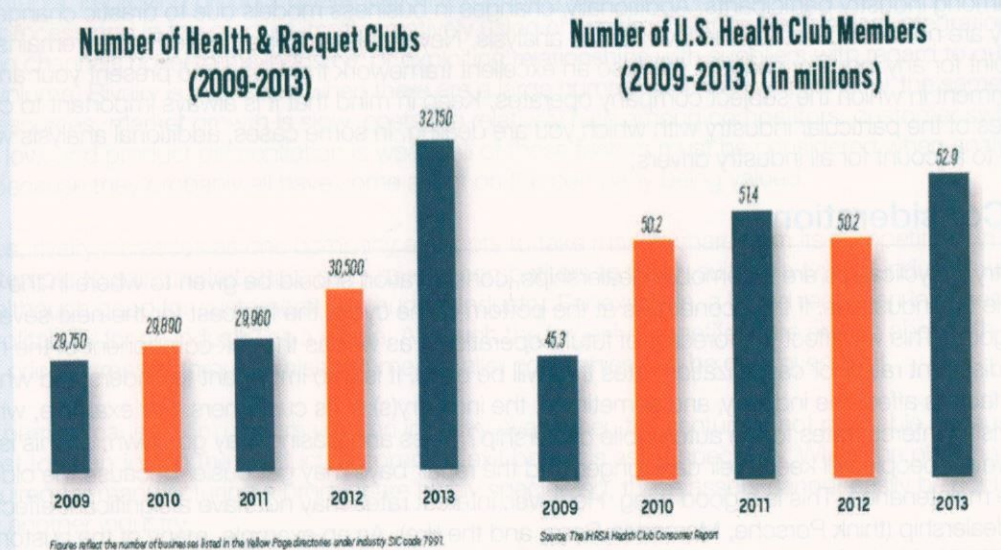
Sometimes, the industry analysis must extend beyond the valuation subject to its customers. Imagine a trucking firm that provides services for major retailers without a discussion about how the trucking firm's customers are expected to do. If the trucking firm is dependent on its customers, it would be negligent to ignore this important point. Another example might be a printing company that only services the pharmaceutical industry. The performance of the pharmaceutical industry would have a great impact on the printing company. Exhibit 6.2 illustrates an industry section taken from an actual report. Notice the many items that could affect a subject company in that same industry. Also, notice how our Porter Five Forces analysis is weaved throughout the discussion.

EXHIBIT 6.2 Industry Section—Health Clubs

INDUSTRY

According to the IHRSA, there were 32,150 health and racquet clubs in the U.S. in 2013, which represents a 5 percent increase from 2012. Roughly 52.9 million Americans were health club members in 2013, which represents a 5.4 percent increase from 2012. Nearly half of all members indicated belonging to either a multipurpose or fitness-only club, while approximately 19 percent belonged to a fitness studio such as yoga/pilates/barre, indoor cycling/rowing, bootcamp/cross training, boxing/mixed martial arts and/or sports specific concept. At least 13 percent of all members belonged to more than one health club. Historic club count and membership data is presented in Figure 8.

(continued)

EXHIBIT 6.2 Industry Section—Health Clubs *(continued)***Figure 8**

In 2013, the average member visited his or her club 102 times, four more days than in 2012. Roughly 44 percent of all members are “core” members; defined as those who use the club 100 days or more per year. This amounts to 23.2 million core members, which represents an increase of 4.5 percent from 2012, in which 22.2 million members were core members. Since 2009, there has been a 20 percent increase overall in the number of core members.

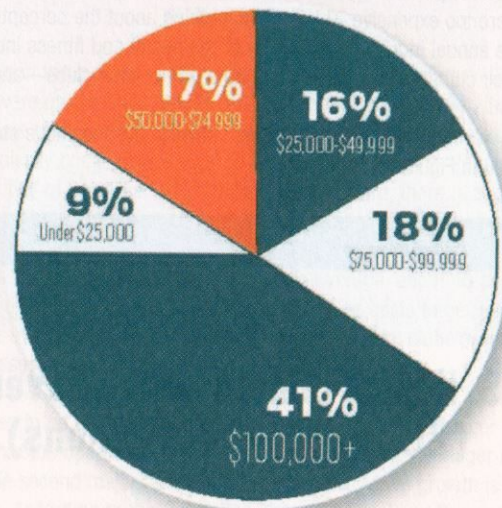
The average age of a health club member in 2013 was 40 years old. More than one out of four health club members (27 percent) were between the ages of 18 and 34 years old (14.2 million). The most represented age group was 35 to 54 year-olds at 35 percent of total membership (18.5 million). The oldest, 55+ age group represented 24 percent of all club members (12.4 million), while those under age 18 represented 15 percent of all members (7.7 million). The number of health club members under age 18 has grown from 4.6 million in 2009 to 7.7 million in 2013.

A major factor influencing health club membership is household income. In 2013, 41 percent of health clubs members had an annual household income of \$100,000 or more, while the second largest segment, 18 percent of members had an annual household income of \$75,000 to \$99,999. Health club membership broken down by income bracket is depicted in Figure 9.

EXHIBIT 6.2 Industry Section—Health Clubs

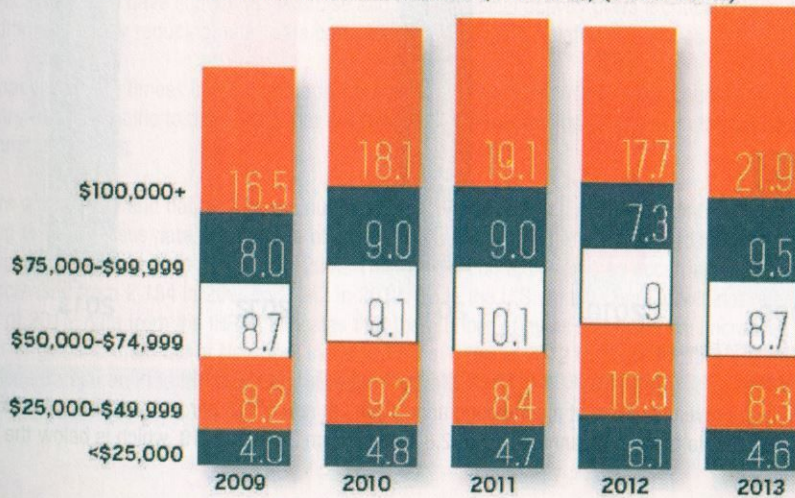
Figure 9

Health Club Membership
by Annual Household Income



Source: The IHRSA Health Club Consumer Report

Health Club Membership
by Annual Household Income (in millions) (2009-2013)



Source: The IHRSA Health Club Consumer Report

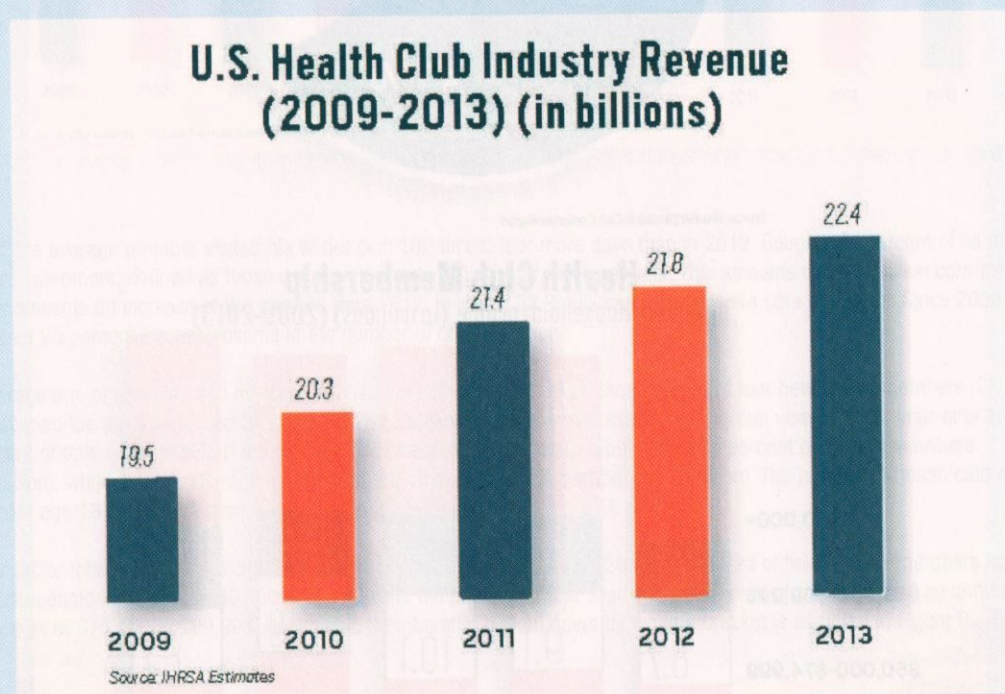
(continued)

EXHIBIT 6.2 Industry Section—Health Clubs *(continued)*

As indicated in Figure 9, there is a direct correlation between the income bracket and the percentage of total membership. In 2013, the \$100,000 or more and \$75,000 to \$99,999 income brackets increased its share of total membership, while each of the other three brackets decreased.

Overall, the main reason that gym members say they return to their health clubs is for overall health and well-being. Staying healthy was the number one personal goal of health club members surveyed in the *IHRSA Trend Report*. When it comes to reasons why health club members left or quit their gyms or just did not join in general, the number one reason across the board was that health club memberships were too expensive. This says something about the perception of health club memberships and about price points in general. The annual industry data survey of the health and fitness industry has advised that club operators need to be aware of who is in their clubs - and who wants to be a part of their clubs—and offer tiered membership options.

In 2013, U.S. health club industry revenue totaled \$22.4 billion. Industry revenues have steadily increased since 2009. Historic industry revenue data is presented in Figure 10.

Figure 10

From 2009 to 2013, industry revenues grew at a compound annual growth rate of 3.5 percent. According to IBISWorld, the industry as a whole is forecast to grow at an annual rate of 2.8 percent from 2014 to 2019, which is below the rate achieved historically.

Competition in the fitness industry is high and competitive pressures are expected to become more severe going forward. According to First Research, the industry is fragmented, with the 50 largest companies accounting for 30 percent of revenues. Large companies have economies of scale in advertising and in buying equipment, while small companies can compete effectively if they have favorable locations or meet customer demands for personalized service and a friendly atmosphere.

EXHIBIT 6.2 Industry Section—Health Clubs

Competition in the fitness industry comes from many facilities, including internal competition (other commercial fitness centers, nonprofits, government organizations, hospitals, businesses and salons), as well as external competition (condominium clubs, exercise studios, country clubs, weight loss centers, home fitness equipment businesses, bowling alleys and marinas). With the number of fitness centers increasing, particularly in certain urban markets, the market in these areas is becoming saturated. According to First Research, in many markets, consumers can choose from among a dozen fitness centers within a 15-minute driving distance. The competition for customers limits centers' ability to raise prices. Prices have also remained subdued due to the number of competitor clubs that are offering lower pricing and a lower level of service, which has continued to increase over the past several years.

Further increasing competitive pressures in the industry are low barriers to entry. According to IBISWorld, barriers to entry in the fitness industry were low in 2013 and were predicted to stay that way in the future. However, there is often a high cost associated with opening a gym and it takes time to build a brand, gain members and generate a profit. According to First Research, commercial grade fitness equipment typically costs from \$3,000 to \$10,000 per machine. Popular franchises require a cash infusion of around \$50,000 and a capital outlay of \$1 million to \$4 million. Furthermore, there is additional cost and effort related to training employees; keeping up to date with the latest fitness trends and offering popular classes.

Another challenge facing fitness centers is high member attrition rates. On average, about 40 percent of fitness club members do not renew memberships making revenue uncertain and requiring high marketing costs to get new members. Attrition for members who make installment payments is even higher for some clubs. To fight attrition, clubs promote programs to monitor diets, fitness levels, exercise regimens, and assess metabolic rates, oxygen use and body fat.

Growth in the fitness industry is expected to be driven by two primary factors. First, the younger generation is now being targeted as a strong opportunity for growth. Club operators will be looking for ways to get younger members to join and then come up with ways to retain that segment. The second major factor that is expected to drive growth is increasing concerns about health and the rising cost of health care. According to the Center for Disease Control and Prevention, during the period from 1990 through 2010, there was a dramatic increase in obesity in the U.S. and rates remain high. State prevalence of obesity continues to remain high across the country in 2012, with no single state having an obesity rate of less than 20 percent. In 2012, 41 states had a prevalence of 25 percent or more and 13 of these states had a prevalence of 30 percent or more. As healthcare costs continue to rise in the U.S., some of the focus on combating obesity and other diseases is being directed at prevention. Both government and medical research have shown that exercise and other physical activity plays a critical role in preventing obesity and other health conditions, thereby reducing healthcare costs for treating obesity-related sicknesses.

The subject company operates fitness centers in the five boroughs of New York, Westchester County and Rockland County. There are several industry trends specific to this region that will have an influence on The Company in the future; saturation, rising rents and low membership fees.

After several years of declining and flat growth, the number of fitness centers in The Company's territory began to trend upward in 2012. According to U.S. Census data, the number of establishments classified under Standard Industrial Classification ("SIC") code 7991 increased from 988 in 2011 to 1,002 in 2012. This same trend appears to be occurring statewide as the number of establishments increased from 2,134 in 2011 to 2,142 in 2012. While the U.S. Census Bureau will not release the 2013 figures until the summer of 2015, data from the IHRSA indicates that the number of gyms statewide has increased significantly since 2012; the number of gyms in the State of New York increased from 1,739 in 2012 to 1,864 in 2013. Historic establishment data from the U.S. Census Bureau and the IHRSA is summarized in Table 8.

(continued)

EXHIBIT 6.2 Industry Section—Health Clubs *(continued)***TABLE 8 Number of Fitness Centers**

Number of Establishments per U.S. Census Bureau							
	2006	2007	2008	2009	2010	2011	2012
Bronx County, New York	41	40	45	41	46	43	46
Kings County, New York	119	112	114	111	120	127	133
New York County, New York	387	408	440	449	437	429	422
Queens County, New York	133	121	127	121	125	123	135
Richmond County, New York	36	31	40	35	35	36	41
Rockland County, New York	47	45	43	43	44	45	42
Westchester County, New York	205	187	198	191	187	185	183
Total Territory	968	944	1,007	991	994	988	1,002
Total New York State	2,286	2,162	2,201	2,139	2,138	2,134	2,142

(Source: US Census Bureau—Number of Establishments for NAICS 713940 [Data Available Through 2012].)

Number of Businesses per IHRSA								
	2006	2007	2008	2009	2010	2011	2012	2013
Total New York State	1,933	1,902	2,279	1,878	1,878	1,762	1,739	1,864

Figures reflect number of businesses listed on Yellow Pages under SIC Code 7991.

(Source: IHRSA—Annual Industry Data Survey of the Health and Fitness Industry.)

The number of fitness centers in The Company's region is going to continue to grow. According to data from the New York City Board of Standards and Appeals ("NYCBOSA"), the number of permits issued for "Physical Culture Establishments," which is defined as "a health club or other business where customers go to exercise or to care for their bodies," increased significantly over the past three years. Historic permits granted by the NYCBOSA are summarized in Table 9.

EXHIBIT 6.2 Industry Section—Health Clubs

TABLE 9 Permits Granted By NYC for Physical Culture Establishments

	2006	2007	2008	2009	2010	2011	2012	2013	6/11/2014
Bronx County, New York	1	1	2	0	1	5	2	3	3
Kings County, New York	0	3	2	2	4	4	6	10	9
New York County, New York	11	14	16	19	9	11	15	25	13
Queens County, New York	3	1	1	1	6	2	5	6	3
Richmond County, New York	1	2	4	1	1	1	1	3	1
TOTAL	16	21	25	23	21	23	29	47	29

(Source: New York City Board of Standards and Appeals Online Database, <<http://www.nyc.gov/html/bsa/html/decisions/decisions.shtml>>.)

In 2012, the number of permits issued increased from 23 to 29, representing the highest number over the seven-year period from 2006 to 2012. In 2013, the number of permits issued increased to 47 and through June 11, 2014, the number of permits already totaled 29, indicating that the city is on pace to have another record year in terms of permits issued.

According to an article in *The Wall Street Journal*, in the future, “gyms and boutique fitness businesses in Manhattan may be as convenient as the neighborhood coffee shop.” In 2013, the number of leases signed for gym and studio space in Manhattan more than doubled to 22, from the nine that closed in the previous year according to data tracked by Cushman & Wakefield. Savanna, a real estate private equity firm, signed a lease for Blink Fitness to take space on the ground and second floors of 31 Penn Plaza. The gym is part of Savanna’s overall efforts to transform the building since its acquisition in 2011. According to Kevin Hoo, vice president at Savanna, “Having an amenity in the building may form a part of a tenant’s choice to lease office or other space at the building, especially if health and well-being is an important part of its workforce culture. Also, this type of amenity, helps drive additional foot traffic for adjacent retailers who may also be looking to rent the property.”

The Company also faces competition from residential real estate developers. Gyms have evolved into an amenity that lends a competitive edge, much like balconies or rooftop decks. According to a spokeswoman from Related Cos., which bought the Equinox chain in 2006, a survey of tenants revealed that the “number one most valued amenity to them is a fitness amenity.” The same has happened at commercial buildings.

Fitness operators are able to take flexible approaches in neighborhoods where prices are high. Boutique studios specializing in a specific regimen rely on selling classes rather than memberships and often take smaller spaces of 3,000 to 9,000 square feet; much less than the 15,000 to 20,000 square feet required by a traditional gym. According to Jeffrey Roseman, an executive vice president at Newmark Goodman Knight Frank who has represented Blink in Manhattan, “Clearly you can’t compete in rent with a Starbucks or Coach.”

While the number of gyms in the New York City area are expected to increase in the near term, these gyms will face the challenge of rising retail rents throughout the region. Retail rental prices in New York City have risen in conjunction with strong retail demand. Asking retail rents by submarket in Manhattan are presented in Table 10.

(continued)

EXHIBIT 6.2 Industry Section—Health Clubs *(continued)***TABLE 10 Prime Q1 2014 Asking Retail Rents By Submarket**

Location	Asking Rent Per Square Foot/Year	% Growth (5 Years)	% Growth (1 Year)	Short-Term Vacancy Trend
Lower Fifth Ave. (42nd to 49th)	\$1,057	77.3%	-2.8%	Down
Upper Fifth Ave. (49th to 60th)	2,618	48.5%	-0.5%	Stable
Madison Avenue	1,466	54.8%	20.5%	Up
SoHo	456	89.2%	7.8%	Up
Third Avenue	276	N/A	5.7%	Up
Times Square	2,407	321.5%	8.3%	Up
Upper West Side	380	10.5%	8.9%	Up
Flatiron	378	N/A	5.0%	Up
Meatpacking	349	N/A	15.2%	Up
Herald Square/W. 34th Street*	736	N/A	N/A	N/A
Lower Manhattan	250	N/A	5.9%	Up

*Newly created statistical submarket.

(Source: Cushman & Wakefield, Marketbeat Retail Snapshot, Manhattan, NY Q1 2014.)

Asking rents for retail space have grown significantly in certain submarkets of Manhattan over the past five years. In some submarkets, asking rents are in excess of \$1,000 per square foot. Positive real estate indicators also are occurring in the other boroughs. Out of the five boroughs, Manhattan actually witnessed the lowest gains in terms of new retail square footage from 2004 to 2014. During this time period, new retail square footage increased by just 0.4 percent while The Bronx, Queens and Staten Island posted 7.3, 13.5 and 12.5 percent increases, respectively. Brooklyn experienced the greatest increase in retail square footage, expanding 14 percent.

After the economic recession in 2008, a major growth market within the New York City region emerged. According to a November 2013 report from IBISWorld, after the 2008 financial crisis, "consumers became more budget conscious which stimulated demand for low cost gym memberships with few amenities." This trend led to the emergence of the low cost fitness center sector which is populated by companies such as Planet Fitness, Retro Fitness, Blink Gym and Crunch.²

Over the past several years, Blink has also rapidly penetrated the local market. The brand, owned by Equinox which has historically focused on the luxury sector, is expanding rapidly throughout the five boroughs, Long Island, Westchester and New Jersey. Since 2011, Blink has opened 24 gyms and the company plans on doubling that number over the next 12 to 18 months. Its "opening season" list includes six more Blink locations during the first half of 2014 in Brooklyn, The Bronx, Queens, as well as Union and Jersey City in New Jersey. By comparison, Equinox, which has 21 locations in Manhattan and Brooklyn and five in Westchester and on Long Island, is scheduled to open just two new clubs this year. The Blink gyms, which lack amenities such as swimming pools and saunas are scalable and can be opened much more quickly than the full service Equinox gyms.

² Rosalyn Retkwa, "Blink Gym Muscles In," *Crain's New York Business*, February 13, 2014, www.craigslist.com/article/20140213/HOSPITALITY_TOURISM/140219920/blink-gym-muscles-in (accessed January 28, 2015).

EXHIBIT 6.2 Industry Section—Health Clubs

According to industry consultant Rick Caro, president of Manhattan-based Management Vision, Blink is entering markets where typically a high-end club would not go. It is also raising the population of gym users beyond fitness buffs. Part of Blink's formula is to put its branches not just where people live, but also near transit stops and retail hubs. For instance, one of its newest locations in Astoria, Queens, is right next to the subway station and a major shopping district.

The low cost segment of the industry is known as high volume/low price, as the objective is to generate a large volume of members by offering affordable prices and controlling costs. In the case of Blink, instead of buying mid-level equipment like some of its competitors, Blink buys the newest and best equipment so it does not have to replace it as often. The company is able to do this because of Equinox's parent The Related Cos, which is one of the country's largest real estate and property management firms. The real estate parent also gives Blink an edge with site acquisitions.

The low cost segment of the fitness industry is hardly wide open. According to Eric Casaburi, CEO of Retro Fitness, Blink "is trying to play in a very crowded market with Planet Fitness and Crunch."

Retro Fitness is a franchise operation founded in 2004 which has gyms in 13 states, but is heavily concentrated in the New York area where it has about 80 locations. The company expects to add 20 to 25 clubs in the metropolitan area this year, including its first Manhattan site. According to Casaburi, "we can compete better because we know what we're doing. They're (Equinox) newbies at this part of the game. If they hired me as a consultant, I would tell them not to leave the sandbox they're familiar with because there are tons and tons of sand crabs."

Planet Fitness is focused on the low cost segment of the fitness industry. Planet Fitness is the fastest growing full-size health club in the United States, as the company opened 149 new clubs and signed more than 200 new franchise agreements in 2013. With more than 750 locations nationwide, Planet Fitness has more than tripled in size in the last five years alone, from 242 clubs in 2008 to 749 at the end of 2013. According to Brian Belmont, executive vice president of development and operations,

2013 was a record year for Planet Fitness' growth: Not only did we open the most locations in the company's history, more than 90% of new clubs were opened by existing franchisees which reinforces their confidence and commitment to growing the brand. We also opened our 700th club in the chain in Stockton, CA. We look forward to continuing our strategic and aggressive growth in 2014, opening clubs in both new and existing markets, and providing more and more people with access to an affordable, high-quality and non-intimidating fitness experience that only Planet Fitness can provide.

Planet Fitness' strategy is to target the non-fitness buffs who are looking to live a healthier lifestyle. According to co-founder and chief executive Chris Rondeau, most health clubs cater to the roughly 15 percent of Americans who consider themselves health nuts and love to work out. Planet Fitness's goal, on the other hand is to attract the much larger percentage of people who want to be healthier but may only use the gym a few times per month.

In order to accomplish this, Planet Fitness has mixed fitness with fun through its monthly pizza nights and bagel breakfasts on the second Tuesday of the month. Its facilities have mostly bright yellow and purple equipment, with an emphasis on cardio and weight-lifting machines. To keep costs down, the company omits amenities offered by more upscale gyms, such as juice bars and personal trainers.

Going forward, Planet Fitness does not have any plans to change its business model. According to Rondeau, the \$10 price tag and the uncompetitive atmosphere are the two big reasons Planet Fitness has been able to differentiate its product.

(continued)

EXHIBIT 6.2 Industry Section—Health Clubs *(continued)***SUMMARY AND OUTLOOK**

The Company will operate in a challenging environment in the near term. The health and fitness industry, particularly in The Company's territory, is highly competitive and competitive pressures are expected to strengthen in the near term. There has recently been significant increases in the number of permits issued for fitness centers and the number of leases signed for gym and studio space in New York City. Furthermore, The Company's competitors within the region have similar plans for expansion over the next several years, which would cause further crowding in an over-saturated market. In addition to direct competition, The Company faces a significant amount of indirect competition from boutique fitness studios and fitness centers located within apartment and office buildings. With retail rent rates increasing within the region, there has been an increased demand for smaller space, which has contributed to the emergence of boutique fitness studios such as Soul Cycle, Fly Wheel and Pure Barre.

Following the financial crisis of 2008, consumers became more budget cautious. This created a significant growth opportunity for the low cost segment of the fitness industry. Companies such as Planet Fitness, Blink and Retro Fitness were able to capitalize on this opportunity and have expanded operations throughout the region. Continued expansion at this rate could prove to be difficult going forward, not only due to competitive pressures, but also increasing rents for retail space throughout the region. Based on all of these factors, the growth outlook for The Company is modest and uncertain.

**Author's Note**

I have intentionally omitted footnotes from this section. I figured that you could live without them. In the real report, there were many.

The industry analysis will vary depending on the amount of information available, as well as the impact that it might have on the valuation subject. Obviously, the example in exhibit 6.2 contains a considerable amount of information. But think about this: While valuing a company in this industry, didn't this analysis cover everything that you can think of that may have been important? I hope so. Otherwise, we spent a considerable amount of time for no reason.

Subject Company Analysis

Item number one on the Revenue Ruling 59-60 hit parade tells us to consider the "nature of the business and the history of the enterprise from its inception." In other words, where has the company been and how did it get there? In this situation, the valuation analyst is looking to analyze not only the company's financial statements, but also the entire business operation. Of course, the financial statement analysis is an important component of the process, but at this stage in the valuation process, the valuation analyst is attempting to determine how effectively the company is being run. The analyst is also determining what risk factors are associated with the company and how they would affect the rate of return that an investor would require if a transaction were to be consummated. Box 6.2 captures some of the more common questions raised when performing a subject company analysis.

SWOT Analysis

A commonly used method of assessing the qualitative factors of a company is a SWOT analysis. SWOT stands for strengths, weaknesses, opportunities, and threats. This analysis provides the framework for identifying the internal and external factors

BOX 6.2**Frequently Asked Subject Company Analysis Questions**

- How does the subject company compare with the entire industry? Is it a large player or a small player in the industry?
- Is it in its infancy, or is it mature?
- Has the company kept up with technology?
- What percentage of market share does the subject company have?
- Does the subject company distribute its products locally, regionally, nationally, or internationally?
- Are there alternative products available in the marketplace that may affect the future of the company's goods and services?
- What is the management structure of the company? Is the business highly dependent on one or a few key people?
- Is there a succession plan for management?

that affect a company's ability to do business. The SWOT analysis should be conducted within an organized framework such as what is shown in table 6.1.

TABLE 6.1

Strengths and Weaknesses	Opportunities and Threats
Financial capital	Industry—Marketplace
Physical capital	Industry—Competitive forces
Human capital	Industry—Suppliers
Customer capital	Political
System capital	Economic
Organizational capital	Sociocultural
	Competitors

The manner in which the valuation analyst proceeds with a SWOT analysis will depend on the budget to perform the assignment. The first stage of a formal SWOT analysis is collecting input from the subject company's management team. The results are then tallied to determine the mean and standard deviation of management's opinions, which can subsequently be ranked according to the average scores. Personally, statistics make me nervous. Later in this book, I am going to explain some stuff about statistics. In the meantime, there are automated systems that allow the data from management to be processed, or the data can be computed in a spreadsheet program. Because the emphasis of this book is the small- to mid-sized company, I am assuming that the valuation analyst does not have the budget for this part of the analysis; therefore, I am not going to discuss this any further. Just be aware that there is software available if the valuation analyst needs it. We are going to concentrate on the qualitative analysis in this area.

In the next stage of the analysis, the analyst needs to build an understanding of management's input. For example, if management identifies the company's financial resources among its strongest qualities, the analyst needs to consider why that is the case. In this instance, the answer may be the company's cash reserves, ability to borrow, or access to equity financing, among other factors.

Finally, the analyst works with management to determine what implications the company's strengths, weaknesses, opportunities, and threats have on strategy, risks, future growth, and financial performance. This will help the valuation analyst to better understand the company's outlook.

The SWOT analysis has often been praised for its easy-to-understand approach to assessing a company's strength within an industry. However, it has also been criticized for its overly simplistic process. (I happen to like simple.) From a strategic planning standpoint, today's analytical processes are becoming increasingly complex and sophisticated, which can offer significant insight into a company's situation and outlook above and beyond what might be concluded through a SWOT analysis. Nevertheless, from a valuation standpoint, the SWOT analysis often can provide the framework needed to determine where a company sits within an industry and compared to its competitors.

Many variations on the SWOT analysis have been developed over the years. One variation appeared in Business Strategy Review, referring to the "Telescopic Observations" (TO) strategic framework.¹ TO addresses specific factors that affect a company's operating environment and operations from a high level view to one that is most relevant to the subject company. Exhibit 6.3 illustrates the TO framework.

¹ Panagiotou, George, *Business Strategy Review*, "Bringing SWOT into focus," 2003, Vol. 14, Issue 2, p. 8–10.

EXHIBIT 6.3

	T	E	L	E	S	C	O	P	I	C	O	B	S	E	R	V	A	T	I	O	N	S
Strengths																						
Weaknesses																						
Opportunities																						
Strengths																						

T – Technological Advancements

E – Economic Considerations

L – Legal and Regulatory Requirements

E – Ecological and Environmental Issues

S – Sociological Trends

C – Competition

O – Organizational Culture

P – Portfolio Analysis

I – International Issues

C – Cost Efficiencies and Cost Structures

O – Organizational Core Competencies and Capabilities

B – Buyers

S – Sellers

E – Electronic Commerce

R – Resource Audit

V – Value Chain

A – Alliances (including Partnerships, Networks, and Joint Ventures)

T – Total Quality Management

I – Industry Key Factors for Success

O – Organizational Structure

N – New Entrants

S – Substitute Products and Services

You'll notice that some of the factors considered by the Telescopic Observation framework are also considered in Porter's Five Forces. In most cases, a thorough Strengths, Weaknesses, Opportunities, and Threats analysis paired with a Five Forces analysis will cover close to all of the industry and company-specific factors relevant to a valuation.

(Source: Panagiotou, George; van Wijnen, Riëtte [2005] 'The "telescopic observations" framework: an attainable strategic tool', *Marketing Intelligence and Planning*, Vol. 23, No. 2, pp. 155–171 [17].)

Ultimately, in looking at the strengths and weaknesses of a company, the valuation analyst should be able to explain what the company does well as opposed to what it does poorly. The competitive advantages and disadvantages of a company's current assets (tangible and intangible) are also important to consider. The analyst should know what aspects of the company's operations can be improved and whether the company needs new equipment, technology, or facilities to accomplish this. Does the company currently have, or can it gain, access to the financial resources to invest in its improvements? Does the company have the resources to withstand a downturn in business or survive an unforeseen negative event? These are all talking points during a management interview.

Another important aspect of a company's strengths and weaknesses is the existence of a corporate goal, strategic direction, and positive corporate culture. A company with stable employees working toward a common goal can typically utilize resources and capitalize on opportunities more effectively than one with no employee loyalties and no direction. A strong corporate culture also allows a company to attract and retain higher quality employees.

The market in which a company operates is very important to its success. To this point, the analyst attempts to identify the opportunities and threats relevant to the subject company. Changes in the company's current market can present opportunities if the company is positioned to take advantage of them. Potential expansions into new markets and geographic locations may also need to be considered. Changes in technology can reduce costs or increase efficiencies in the subject company as long as the subject company has the ability to invest in it. Many of the opportunities discussed in the preceding paragraphs can become threats to a company if the company is not able to take advantage of them. If an opportunity exists but the subject company is unable to capitalize on it, competitors may take advantage and gain market share. Similarly, advances in technology can allow competitors to operate more efficiently and offer lower prices, which means it can

take customers from the subject company if the subject company is unable to invest in the same technology. Changes in regulatory requirements and customer demand may also force a change in a company's products. If the company is unable to invest in its product to meet the change, it likely will have a significant impact on its ability to do business.

The answers to the many questions that the valuation analyst needs to have answered will serve dual purposes. The first purpose is to demonstrate that the valuation analyst understands the nature of the business, as well as what makes the business run. The second purpose, once again, is to perform a risk assessment of the subject company. What we are trying to do is determine whether the valuation subject is similar or dissimilar, or more risky or less risky, than other companies in the industry. Factors that the valuation analyst will analyze include the products and services offered by the company, customer base, suppliers, management, operations, and ownership structure. A good portion of this information will fit nicely into the history and nature of the company section of the valuation report. This will also assist the valuation analyst in developing market multiples, discount rates, and capitalization rates.

Financial Analysis

The purpose of the financial analysis is to review the subject company's performance with respect to other companies, its industry peers, or itself. Comparing the subject company to its peers helps the valuation analyst assess whether the company is more or less risky in relation to its peer group. Comparing the company to itself allows the valuation analyst to determine how the company has performed in the past. This can help give the valuation analyst an idea of future trends that may occur.

During the financial analysis, the valuation analyst attempts to identify unusual items, nonrecurring items, and trends. An attempt should be made to explain what happened and why it happened. If there is a departure from the norms of the industry, this should also be investigated and explained.

The following analytical tools are used by the valuation analyst:

- Comparative company analysis
- Common size financial statements
- Financial ratio analysis
- Comparative industry analysis
- Trend analysis
- Operational analysis

Comparative Company Analysis

Most business valuation analysts will request at least five years of financial information about the subject company. I like to request six. This way, a five-year cash flow for the subject company can be calculated. The amount of data will depend on the facts and circumstances of each assignment. However, a good rule of thumb is to ask for enough years of data to cover a complete business cycle. This will allow the valuation analyst to create a spreadsheet looking for trends that may have occurred, as well as inconsistencies in the reported data.

I cannot emphasize strongly enough how essential it is for the valuation analyst to seriously consider how much information to request. If the analyst was doing a valuation as of the end of 2011, for many businesses, 2011, 2010, 2009, 2008, and possibly 2007 (when the recession officially started) were pretty bad years. If the only information the analyst looked at were these five years, he or she most likely would be valuing the company at its low point in the economic cycle. Assuming that the company survived, the future may be much better than these years indicate. One way to determine this would be to request financial information for the years 2002–2006 also. Of course, sometimes it is difficult to get older financial information from the client. The valuation analyst can only hope that the client is a pack rat.

Common Size Financial Statements

The use of common size financial statements is an excellent way to analyze the subject company with respect to other companies of different sizes. By presenting the data as percentages, the size differentials are eliminated between the subject company and its peer group. We are not ignoring size in selecting guideline companies; however, using percentages allows the valuation analyst to make a comparison in relative terms (for example, cost of goods sold as a percent of sales). A common size analysis also allows an analyst to identify relative trends (for example, expenses relative to sales and current assets to total assets). Exhibit 6.4 illustrates a common size analysis taken from an actual report. In this illustration, industry information was used as a comparison to the valuation subject.



Author's Note

Some sources use average balance sheet figures, whereas others use year-end data in the calculations of ratios. Make certain that the valuation analyst is consistent in the calculations to ensure that he or she is using the same basis when comparing ratios with industry sources. Also, make sure that the ratios used from the comparative data are those that best match the time period of the valuation.

EXHIBIT 6.4 Common Size Financial Analysis

Another financial analysis tool is to look at a company's common size financial statements. A common size balance sheet depicts each value as a percentage of total assets. Common size statements are used to look at trends in a company's financial position, as well as to compare the company with industry data.

In order to compare ABC Lumber to industry data, we determined the appropriate Standard Industrial Classification (SIC) code for ABC Lumber. A description of ABC Lumber and the services it provides was included in an earlier section of this report. Based on this description, we determined that ABC Lumber is best described by the following SIC code.

5031 LUMBER, PLYWOOD, AND MILLWORK

Establishments with or without yards, primarily engaged in the wholesale distribution of rough dressed and finished lumber (but not timber); plywood; reconstructed wood fiber products; doors and windows and their frames (all materials); wood fencing; and other wood or metal millwork.

We located composite industry data in the MicroBilt Corporation's Integra Financial Benchmarking Data (Integra). Integra compiles its database from 31 proprietary and publicly available sources. The database consists of information of more than 3.5 million companies in more than 950 industries.

The Integra database contained composite data for 8,809 companies classified in SIC code 5031. This was further stratified by sales range. Data for 1,066 companies with sales in the range of \$10 to \$24.99 million was included.

Table 3 presents the common size balance sheet for ABC Lumber, along with comparative data for companies classified within SIC code 5031.

EXHIBIT 6.4 Common Size Financial Analysis**TABLE 3 Common Size Balance Sheet as of December 31**

	2011	2012	2013	2014	2015	2016	INTEGRA
Current assets							
Cash	5.43%	17.15%	4.95%	1.59%	8.01%	0.07%	5.32%
Marketable securities	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.13%
Accounts receivable	48.57%	42.21%	53.08%	45.21%	44.73%	53.52%	32.41%
Inventories	37.51%	33.27%	36.03%	44.26%	38.91%	38.47%	31.81%
Prepaid expenses	0.17%	0.45%	0.00%	0.05%	0.00%	0.00%	0.00%
Due from DEF Realty	0.17%	0.15%	0.17%	0.18%	0.16%	0.16%	0.00%
Due from XYZ Realty	.00%	0.00%	0.00%	3.82%	4.84%	4.86%	0.00%
Other current assets	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.04%
Total current assets	91.84%	93.23%	94.24%	95.11%	96.65%	97.08%	73.71%
Fixed assets							
Land	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%	n/a
Building and improvements	4.74%	4.43%	4.80%	5.21%	4.47%	4.69%	n/a
Machinery and equipment	23.67%	21.15%	21.81%	27.25%	26.31%	27.92%	n/a
Furniture and fixtures	2.06%	1.92%	2.08%	2.27%	1.94%	2.04%	n/a
Gross fixed assets	30.48%	27.52%	28.70%	34.75%	32.74%	34.66%	34.01%
Accumulated depreciation	22.32%	20.75%	22.94%	29.87%	29.38%	31.74%	16.53%
Net fixed assets	8.16%	6.77%	5.76%	4.89%	3.35%	2.92%	17.48%
Other assets							
Intangible assets (net)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.36%
Other assets	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.45%
Total other assets	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.82%
TOTAL ASSETS	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Current liabilities							
Accounts payable	25.99%	14.12%	19.78%	19.57%	18.83%	24.55%	17.54%
Long-term debt, current portion	0.00%	1.09%	1.18%	3.98%	4.45%	2.66%	11.08%
Notes payable	6.44%	2.57%	6.71%	4.07%	2.29%	1.52%	0.00%

(continued)

EXHIBIT 6.4 Common Size Financial Analysis *(continued)***TABLE 3 Common Size Balance Sheet as of December 31** *(continued)*

	2011	2012	2013	2014	2015	2016	INTEGRA
Accrued expenses	0.04%	0.04%	0.04%	0.01%	0.04%	0.01%	0.00%
Payroll taxes payable	0.07%	12.17%	0.00%	0.00%	0.00%	0.00%	0.00%
Sales taxes payable	0.53%	0.47%	0.46%	0.67%	0.54%	0.64%	0.00%
Income taxes payable	0.00%	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%
Other current liabilities	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.68%
Total current liabilities	33.07%	30.45%	28.30%	28.29%	26.15%	29.39%	35.30%
Long-term liabilities							
Long-term debt	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	14.88%
Loans from stockholders	31.01%	32.25%	32.98%	29.25%	36.58%	29.40%	2.24%
Loan payable, Jill investment	0.00%	2.63%	0.00%	0.00%	0.00%	0.00%	0.00%
Other liabilities	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.17%
Total long-term liabilities	31.01%	34.88%	32.98%	29.25%	36.58%	29.40%	18.29%
Total liabilities	64.08%	65.33%	61.28%	57.53%	62.74%	58.79%	53.59%
Total stockholders' equity	35.92%	34.67%	38.72%	42.47%	37.26%	41.21%	46.41%
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Note: Figures may not add due to rounding.

An analysis of the common size balance sheet indicates that ABC Lumber's current assets as a percentage of total assets have increased consistently since 2011. Overall, ABC Lumber is significantly stronger than its industry counterparts in this category. However, ABC Lumber has a much lower percentage of fixed assets than its industry peers. This is because ABC Lumber's fixed assets are old and have been fully depreciated. However, the fixed assets are still in use by ABC Lumber.

On the liability side of the balance sheet, ABC Lumber appears to be weaker than the industry composite data. Although total liabilities have decreased from 64.08 percent of assets in 2011 to 58.79 percent in 2016, this is slightly higher than the industry, which has total liabilities of 56 percent of assets. However, this is due to the greater amount of debt ABC Lumber has.

The next step in the analysis was to look at ABC Lumber's historic income statements for 2011–2016. ABC Lumber's revenues have been fairly erratic over the period, decreasing from a high of \$12.3 million in 2011 to a low of \$10.3 million in 2014, and back up to \$11.4 million in 2016.

Despite the drop in revenues, ABC Lumber finished 2016 with net income of \$65,058. This was very close to the 2011 net income of \$66,518, which was the high for the period. Because revenues were lower in 2016 than in 2011, ABC Lumber has shown improvement in managing its expenses.

ABC Lumber's common size income statement was compared to industry composite data. This is presented in table 4.

EXHIBIT 6.4 Common Size Financial Analysis

TABLE 4 Common Size Income Statement for the Years Ended December 31

	2011	2012	2013	2014	2015	2016	INTEGRA
Total revenues	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Total cost of sales	62.72%	64.97%	67.18%	67.12%	63.67%	62.86%	91.06%
Gross profit	37.28%	35.03%	32.82%	32.88%	36.33%	37.14%	8.94%
Total operating expenses	38.59%	35.61%	33.44%	33.40%	35.73%	36.30%	6.82%
Operating income (Loss)	-1.31%	-0.58%	-0.61%	-0.52%	0.60%	0.84%	2.12%
Interest expense	0.20%	0.46%	0.49%	0.47%	0.36%	0.35%	0.46%
Other income	2.25%	1.44%	1.62%	1.34%	0.00%	0.08%	0.33%
Income before taxes	0.74%	0.40%	0.52%	0.36%	0.25%	0.58%	1.99%
Income taxes	0.20%	0.09%	0.19%	0.11%	0.00%	0.01%	0.76%
NET INCOME	0.54%	0.31%	0.34%	0.24%	0.24%	0.57%	1.24%

Note: Figures may not add due to rounding.

The data in table 4 indicates that ABC Lumber's operating income as a percentage of revenue had been negative until 2015. Despite the turnaround, operating income is much lower than the industry counterparts. This is due to ABC Lumber's extremely high percentage of operating expenses. The industry average for operating expenses is 10.26 percent of revenues, whereas ABC Lumber's operating expenses were 36.30 percent in 2016. Over the six-year period, this percentage had not changed significantly. Some of the distinction is the classification of expenses; cost of sales for ABC Lumber is significantly lower than the industry, whereas operating expenses are higher. However, management has indicated that their expenses might be higher than the industry because of ABC Lumber's commitment to service. This causes a higher investment in payroll.

Financial Ratios

The use of financial ratios allows the valuation analyst to analyze the subject company in terms of liquidity, performance, profitability, and leverage. These ratios are compared against industry data, guideline company data, or both, for the assessment of risk. Some ratios are more meaningful in different industries, but the analysis is essentially the same. For example, you would expect the inventory turnover ratio for a perishable food business to be greater than that for an automobile dealership. A description of some of the more common ratios follows.

Current Ratio = Current Assets ÷ Current Liabilities

The current ratio measures the margin of safety that management maintains to allow for the inevitable unevenness in the flow of funds through the current asset and current liability accounts. A company needs a supply of current funds to be assured of being able to pay its bills when they come due. This ratio shows the company's ability to pay for its ongoing operations in the short term. A company's liquidity is essential to its good credit, its ability to grow with its own funds, and its ability to pay dividends to its owners.

Quick Ratio = (Cash + Marketable Securities + Accounts Receivable) ÷ Current Liabilities

Quick assets include cash, marketable securities, and accounts receivable. Presumably, these items can be converted into cash quickly at approximately their stated amounts, unlike inventory, which is the principal current asset that is excluded from this calculation. The quick ratio is, therefore, a measure of the extent to which liquid resources are available to meet current obligations. This ratio tends to be a better measure of the company's short-term liquidity, particularly if cash needs to be generated quickly to pay bills.

Cash to Current Liabilities = Cash ÷ Current Liabilities

Cash and cash equivalents are the most readily available assets with which to pay liabilities. This ratio indicates whether the subject company has a strong enough cash position to meet its short-term obligations. This ratio can also assist the valuation analyst in determining whether the subject company is carrying excess cash on its balance sheet. Excess cash may show a poor use of current assets by management. I wish that I had the problem of having excess cash. My kid made sure that never happened!

Accounts Payable to Inventory = Accounts Payable ÷ Inventory

Businesses generally purchase inventory on credit. The ratio of accounts payable to inventory measures the extent to which a company's inventory is financed by the suppliers of that inventory. A low ratio may indicate that management is not taking advantage of the credit terms available from suppliers. When the ratio is used in conjunction with inventory turnover ratios, it might also indicate a high level of inventory being carried by the company.

Accounts Payable Payout Period = Accounts Payable ÷ (Cost of Goods Sold ÷ Number of Days)

The accounts payable payout period measures the timeliness of paying suppliers. This figure is related directly to the normal credit terms of the company's purchases. This ratio allows the valuation analyst to consider the company's ability to obtain favorable terms from vendors because of good creditworthiness.

Debt to Equity = Total Liabilities ÷ Net Worth

Debt is risky because if creditors are not paid promptly, they can take legal action to obtain payment, which, in extreme cases, can force the company into bankruptcy. The greater the extent to which a company obtains its financing from its owners, the less worry the company has in meeting its fixed obligations. The debt-to-equity ratio shows the balance that management has struck between debt and owners' equity. A proper capital structure should include a portion of debt because debt has a lower cost of capital. Different industries have different debt-to-equity relationships.

EBIT to Total Assets = Earnings Before Interest and Taxes ÷ Total Assets

Earnings before interest and taxes (EBIT) to total assets is an important return-on-investment ratio that provides a profit analysis based on earnings before interest and income taxes. This ratio is best compared with a company's annual interest rate on borrowed funds. If the ratio of a firm's EBIT to total assets is higher than its weighted average cost of capital, the ratio is favorable.

Times Interest Earned = EBIT ÷ Interest

The times-interest-earned ratio measures the number of times that the earnings before interest and taxes will cover the total interest payments on debt. The result indicates the level to which income can decline without impairing the company's ability to meet its interest payments on debt. If the ratio falls below 1.0, the firm is not generating enough earnings to cover the interest due on loans. This ratio indicates the financial risk of the company.

Average Collection Period = Accounts Receivable ÷ (Credit Sales ÷ 365)

The average collection period can be evaluated against the credit terms offered by the company. As a rule, the collection period should not exceed one and one-third times the regular payment period; that is, if a company's typical terms call for payment in 30 days, the collection period should not exceed 40 days. Changes in the ratio indicate changes in the company's credit policy or changes in its ability to collect receivables.

Inventory Turnover = Cost of Goods Sold ÷ Ending Inventory

Inventory turnover is an indication of the velocity with which merchandise dollars move through the business. An increase in the value of inventory may represent the additional stock required by an expanding business, or it may represent an accumulation of merchandise from a declining sales volume. In the latter case, the inventory turnover will decrease. A decrease in the inventory turnover ratio may be a significant danger signal.

Inventory Holding Period = 365 ÷ Inventory Turnover

Some of the company's products come in and go out in a matter of days; other goods may stay in stock for six months or longer. The holding period differs for different products. Business managers and owners must be concerned with a holding period that is longer than necessary because of the high costs of tying up capital in excess inventory. On the other hand, reducing inventory levels too much could result in lost sales because certain products are not available when the customer wants them. The cost of carrying inventory has to be balanced against the profit opportunities lost by not having the product in stock, ready for sale. When inventory is financed or floor planned, interest rates influence the amount of inventory that may be carried. When rates are low, inventory balances tend to be high because there is not a great cost in carrying more inventory. When rates are high, the opposite is the case.

Other Financial Ratios

There are many other financial ratios that can be considered by the valuation analyst. Profitability ratios are one group of ratios that are often considered by the valuation analyst. Some of the ratios that will be calculated may relate to the company's equity, whereas others relate to the company's invested capital. Invested capital is considered to be the company's long-term debt or nonworking capital debt plus the equity of the company. Because a proper capital structure will generally include an appropriate mix of debt and equity, some valuation analysts prefer to value the company in this manner. What this really does is allow the valuation analyst to value the company on an invested capital basis, eliminating differences in leverage between the subject company and the guideline companies. This becomes more important in the valuation of larger companies because the companies being used for comparison purposes may be publicly traded and have very different capital structures. We will discuss this further in chapter 9.

The return-on-equity ratio (also known as the *Dupont* analysis²) is considered to be one of the most important financial ratios because it measures profitability, turnover, and leverage all in one ratio. The Dupont formula allows the analyst to determine whether margin, leverage, or asset utilization (or some combination thereof) are driving returns to shareholders and, when compared to industry peer group data, how management manages these issues (better, worse, or differently) than the industry.

The mathematical breakdown of the return on equity ratio is as follows:

$$\frac{\text{Net Income}}{\text{Equity}} = \frac{\text{Net Income}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Assets}} \times \frac{\text{Assets}}{\text{Equity}}$$

² For a really good article, see "Risk Assessment and the DuPont Formula," published in the October/November 2009 edition of *Financial Valuation and Litigation Expert*.

Another analytical tool used by valuation analysts is the compound growth rate. Compound growth rates are frequently used by the valuation analyst in the selection of guideline companies, pricing multiples, discount rates, and capitalization rates. Both revenues and net income (cash flow and assets can be used also) should be analyzed by the valuation analyst. The mathematical formula for calculating compound growth as a percentage is as follows:

$$\left(\sqrt[n]{\text{amount}_n \div \text{amount}_1} \right) - 1$$

The compound growth rate is calculated using historical data to give an indication of future growth. However, keep in mind that the formula considers only the first and last year being used in the analysis. Therefore, it does not calculate a change from year to year. Because of this, the valuation analyst must be careful in selecting the first and last years for the calculation. Ideally, the analyst wants to look at the business cycle (peak to peak or valley to valley) or look at a constant trend. When looking at growth, the valuation analyst should also examine the year-to-year changes. Over a longer period of time, this is very often more meaningful than the compound growth rate. Let's look at a simple example to illustrate this concept. Assume that Smith Company had sales as follows:

Year	Amount
2012	\$1,350,000
2013	1,675,000
2014	2,100,000
2015	2,200,750
2016	2,450,000

The 5-year compound growth rate for Smith Company is 16.1 percent (calculated as the fourth root of \$2,450,000 divided by \$1,350,000, or 1.1606, then subtract 1). If you do not know how to use a financial calculator, here are the keystrokes for an HP 12C calculator:

Enter	1,350,000	Press PV
Enter	2,450,000	Press CHS*, then FV
Enter	4	Press n
Press i		

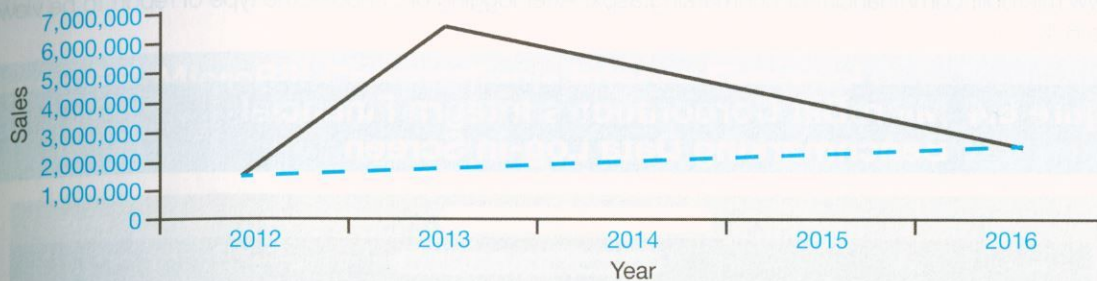
*CHS = change sign. One of the data points must be a negative.

You should get 0.160668, which you can round to 16.1 percent. If you do not have a financial calculator, you can do what I do: yell for a staff person to help (that only works if you are the boss and not a staff person or a student trying to do this stuff). A review of the increase in sales on an annual basis indicates that the company experienced growth in each year during this 5-year period. But what if the sales were as follows?

Year	Amount
2012	\$1,350,000
2013	6,450,000
2014	5,375,000
2015	3,900,000
2016	2,450,000

In this situation, the compound growth rate would be the same 16.1 percent, but look at the difference in the trend (figure 6.3).

Figure 6.3 Compound Versus Year-to-Year Growth



The solid line demonstrates the erratic year-to-year growth, whereas the dotted line illustrates the more consistent year-to-year growth over the same period. Pretty different, huh?

Clearly, although the beginning and ending points of this five-year period are the same in both series of numbers, the trends are dramatically different. The valuation analyst needs to pay attention to trends, not just a group of calculations. Remember that the goal is to be able to use this information to forecast the future and the risk of that future not occurring. What does the first illustration say about risk as contrasted with the second illustration?

In this instance, the valuation analyst would probably not use compound growth rates because they would have little relevance. The analyst must pay particular attention to the information and not just go through the motions of doing a series of calculations because he or she read a book or has a computer program that will calculate these ratios for her. *Analysis* means that the valuation analyst must *analyze* the information! Otherwise, financial analysis would be called "financial calculation."

Comparative Industry Analysis

The purpose of a comparative analysis is to compare the subject company's operating performance with that of its peer group. This analysis is undertaken to determine the company's position with respect to its peers. Is it more or less risky than its peer group? How well does the company perform compared with the peer group? Some of the more common sources for comparative data include the following:

- Trade association surveys
- MicroBilt Corporation's Integra Financial Benchmarking Data
- Sagemworks
- Risk Management Association (RMA) Annual Statement Studies
- Almanac of Business and Industrial Ratios
- D&B Key Business Ratios
- Bizminer
- Guideline companies

Comparative analysis is a useful tool for a valuation analyst to use only if the subject company can be meaningfully compared with either specific guideline companies or industry composite data. Common size financial statements and financial ratio analyses are much more meaningful if the results can be compared with guideline company results or industry data.

If a company is large enough, there may be publicly traded companies that can be used for this type of analysis. For smaller companies, and even sometimes for the larger companies, it is generally worthwhile to compare the subject to some form of industry data, whether it is obtained from a trade organization or one of the other sources previously mentioned.

I want to spend some time showing the type of information that can be obtained and used from a great resource. For many valuation analysts who value smaller companies, this is the ideal type of information to use as a basis for comparison. Let me demonstrate what I'm talking about. I am going to use the example of a restaurant.

Integra Financial Benchmarking Data is owned and maintained by MicroBilt Corporation and can be accessed at www.microbilt.com/financial-benchmarking.aspx. After logging on, choose the type of report to be viewed (figure 6.4).

Figure 6.4 MicroBilt Corporation's Integra Financial Benchmarking Data Log-In Screen

Default Integra [Select Product]

CLICK SINGLE SELECT PACKAGE

Enter a Zip Code, Phone Number or Social Security Number

Integra Industry Selection

NAICS OR SIC CODE	DESCRIPTION
Find	

REPORT IS BEING PREPARED FOR

PDF HTML EXCEL

Income Statement Worksheet

	2013	2014	2015
REVENUE			
COST OF SALES			
GROSS MARGIN			
SELLING, GENERAL & ADMIN			
OFFICER COMPENSATION			
PENSION & BENEFITS			
ADVERTISING & SALES			
BAD DEBTS			
RENTS PAID			
DEPRECIATION & AMORTIZATION			
OPERATING EXPENSES			
OPERATING INCOME			
INTEREST INCOME			
INTEREST EXPENSE			
OTHER INCOME (EXP.)			
PRE-TAX INCOME			
INCOME TAXES			
NET INCOME			

(Source: Integra Information, a Division of MicroBilt Corporation.)

We use the Five Year Industry Report. After clicking on the link for the Five Year Industry Report, there will be an option to input a Standard Industrial Classification (SIC) code or North American Industry Classification System (NAICS) code. If the code is not known, push the button that allows the user search for the appropriate code. In addition to entering 5812 (the SIC code for Eating and Drinking Places), enter a sales range for the subject company to allow a better comparison to be made based on size. In this case, the screen looks like this (figure 6.5).

Figure 6.5 MicroBilt Corporation's Integra Financial Benchmarking Data Sic Code and Sales Size Selection

(Source: Integra Information, a Division of MicroBilt Corporation.)

You may notice that there are 57,035 firms represented in this category. That is one of the reasons why I like this product. This amount of information makes it difficult to argue that the valuation analyst does not have a statistically valid sample size. Of course, not every SIC code has this many firms, but it is great when it does.

This screen allows us to choose the sales size that is pertinent to the valuation subject. In this instance, our subject has sales between \$500,000 and \$999,999. There are still 9,105 companies in this data set. If we click "Submit," we get a 9-page report that starts with this (figure 6.6).

Figure 6.6 MicroBilt Corporation's Integra Financial Benchmarking Data Summary Screen

integra reports
**five year
industry report**



Summary

Prepared for:		SIC:	5812
Date:	8/9/2017	Description:	Eating places
Database #:	2015.2	Sales Range:	\$500,000 - \$999,999
Profile Type:	Industry Profile	Final Year Business Count:	9,105

SIC	Description	Sales Range	# of Firms In Sales Range
5812	Establishments primarily engaged in the retail sale of prepared food and drinks for on-premise or immediate consumption. Caterers and industrial and institutional food service establishments are also included in this industry.	\$500,000 - \$999,999	9,105

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(Source: Integra Information, a Division of MicroBilt Corporation.)

The next page (figure 6.7) provides us with some really neat summary information. We also get industry growth information. We then get condensed financial information and the summary count information. This page provides us with the 50,000 foot overview.

Figure 6.7 MicroBilt Corporation's Integra Financial Benchmarking Data Summary Screen

integra
reports
**five year
industry report**



Overview

Prepared for:		SIC:	5812
Date:	8/9/2017	Description:	Eating places
Database #:	2015.2	Sales Range:	\$500,000 - \$999,999
Profile Type:	Industry Profile	Final Year Business Count:	9,105

Industry Growth	2012	2013	2014	2015	CAGR
Industry Growth - Revenue	6%	5.7%	3.6%	7.7%	5.7%
Industry Growth - EBITDA	6.1%	7.1%	4%	9%	6.5%
Industry Growth - Pre-Tax Income	6.3%	5.9%	2.8%	8.1%	5.7%

Year Ending: 2015

Balance Sheet					
	\$	%		\$	%
Current Assets	74,444	27.3%	Current Liabilities	48,816	17.9%
Fixed Assets	122,747	45%	Long Term Debt	67,241	24.7%
Other Assets	8,750	3.2%	Other Liabilities	13,356	4.9%
Total Assets	272,562	100%	Total Liabilities	152,417	55.9%
			Net Worth	120,145	44.1%

Income Statement		
	\$	%
Revenue	725,284	100%
Gross Margin	424,726	58.6%
Operating Expenses	394,555	54.4%
Operating Income	30,171	4.2%
Pre-tax Income	23,644	3.3%
Net Income	14,659	2%

Cash Flow Analysis	
Provided/(Used) by	\$
Operating Activities	34,030
Investing Activities	(35,326)
Financing Activities	2,816

Ratios	
Return on Net Worth	12.2%
Return on Assets	5.4%
Current Ratio	1.52
Quick Ratio	1.05
Debt/Net Worth	x1.27
Z Score	<1.23 Weak >2.90 Strong

Business Counts	
Sales Range	Business Count
All Sales Ranges	57,035
Less Than \$250,000	27,945
\$250,000 - \$499,999	11,949
\$500,000 - \$999,999	9,105
\$1,000,000 - \$2,499,999	6,040
\$2,500,000 - \$4,999,999	1,230
\$5,000,000 - \$9,999,999	475
\$10,000,000 - \$24,999,999	176
\$25,000,000 - \$49,999,999	53
\$50,000,000 - \$99,999,999	31
\$100,000,000 - \$249,999,999	15
\$250,000,000 - \$499,999,999	8
More Than \$500,000,000	8

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(Source: Integra Information, a Division of MicroBilt Corporation.)

The next page begins giving us the details (figure 6.8).

Figure 6.8 MicroBilt Corporation's Integra Financial Benchmarking Data Common Size Income Statement

Integra
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industry report**



Income Statement

Prepared for:
Date: 8/9/2017
Database #: 2015.2
Profile Type: Industry Profile

SIC: 5812
Description: Eating places
Sales Range: \$500,000 - \$999,999
Final Year Business Count: 9,105

Income Statement	2011	2012	2013	2014	2015
Revenue	100%	100%	100%	100%	100%
Cost of Sales	44.9%	44.1%	43.2%	42.3%	41.4%
Gross Margin	55.1%	55.9%	56.8%	57.7%	58.6%
Selling, General & Administrative	32.8%	33.4%	34.1%	34.7%	35.3%
Officer Compensation	5.4%	5.4%	5.5%	5.5%	5.5%
Pension & Benefits	0.8%	0.8%	0.8%	0.8%	0.8%
Advertising & Sales	2.2%	2.3%	2.3%	2.3%	2.3%
Bad Debts	0%	0%	0%	0%	0%
Rents Paid	6.9%	7.1%	7.2%	7.4%	7.6%
Depreciation & Amortization	2.6%	2.7%	2.7%	2.8%	2.9%
Operating Expenses	50.8%	51.7%	52.6%	53.5%	54.4%
Operating Income	4.2%	4.2%	4.2%	4.2%	4.2%
Interest Income	0%	0%	0%	0%	0%
Interest Expense	-1%	-1%	-1%	-1%	-1%
Total Other Inc(Exp)	0.1%	0.1%	0.1%	0.1%	0.1%
Pre-Tax Income	3.3%	3.3%	3.3%	3.2%	3.3%
Income Taxes *	-1.3%	-1.3%	-1.2%	-1.2%	-1.2%
Net Income	2.1%	2%	2%	2%	2%

* Income taxes are derived by applying a 38% tax rate to pre-tax income.

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(Source: Integra Information, a Division of MicroBilt Corporation.)

We get a five-year common size, comparative income statement. Notice that it breaks out items such as "Officer Compensation" and "Depreciation & Amortization." This may be very helpful when we have to adjust the financial statements for these items. We will talk about the adjustments in a little while, so be patient. After allowing us to compare the subject to the industry data, we then get the next page that provides us with the average dollars within the range of the companies based on the sales range selected previously. This allows us to see where the subject company falls with respect to size (figure 6.9 on the following page).

Figure 6.9 MicroBilt Corporation's Integra Financial Benchmarking Data Income Statement

integra
reports
**five year
industry report**



Income Statement

Prepared for:		SIC:	5812
Date:	8/9/2017	Description:	Eating places
Database #:	2015.2	Sales Range:	\$500,000 - \$999,999
Profile Type:	Industry Profile	Final Year Business Count:	9,105

Income Statement	2011	2012	2013	2014	2015
Revenue	579,694	614,795	649,661	673,395	725,284
Cost of Sales	260,514	271,002	280,654	284,981	300,558
Gross Margin	319,180	343,793	369,007	388,414	424,726
Selling, General & Administrative	190,314	205,587	221,210	233,534	255,953
Officer Compensation	31,361	33,383	35,407	36,835	39,818
Pension & Benefits	4,522	4,795	5,133	5,387	5,803
Advertising & Sales	12,869	13,833	14,877	15,623	17,044
Bad Debts	232	246	260	269	290
Rents Paid	40,173	43,527	47,035	49,831	54,831
Depreciation & Amortization	15,130	16,477	17,801	18,922	20,816
Operating Expenses	294,601	317,848	341,723	360,401	394,555
Operating Income	24,579	25,945	27,284	28,013	30,171
Interest Income	58	61	65	67	73
Interest Expense	(5,913)	(6,209)	(6,497)	(6,599)	(7,035)
Total Other Inc(Exp)	464	492	455	404	435
Pre-Tax Income	19,188	20,289	21,307	21,885	23,644
Income Taxes *	(7,291)	(7,710)	(8,097)	(8,316)	(8,985)
Net Income	11,897	12,579	13,210	13,569	14,659

* Income taxes are derived by applying a 38% tax rate to pre-tax income.

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(Source: Integra Information, a Division of MicroBilt Corporation.)

We then get similar schedules for the balance sheet, providing us with common size and average dollars (figures 6.10 and 6.11 on the following pages).

Figure 6.10 MicroBilt Corporation's Integra Financial Benchmarking Data Common Size Balance Sheet

integra
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**five year
industry report**



Balance Sheet

Prepared for:	SIC: 5812
Date: 8/9/2017	Description: Eating places
Database #: 2015.2	Sales Range: \$500,000 - \$999,999
Profile Type: Industry Profile	Final Year Business Count: 9,105

Balance Sheet	2011	2012	2013	2014	2015
Assets					
Cash	15%	14.6%	14.2%	13.8%	13.5%
Marketable Securities	0.6%	0.6%	0.6%	0.6%	0.6%
Accounts Receivable less Allowance for Bad Debt	5.1%	5%	4.9%	4.8%	4.7%
Accounts Receivable, net	0%	0%	0%	0%	0%
Raw Material	5.1%	5%	4.9%	4.8%	4.7%
Work in Process	0%	0%	0%	0%	0%
Finished Goods	0%	0%	0%	0%	0%
Inventory	3.8%	3.7%	3.5%	3.4%	3.2%
Other Current Assets	5.2%	5.2%	5.3%	5.3%	5.3%
Total Current Assets	29.7%	29.1%	28.5%	27.9%	27.3%
Property, Plant & Equipment less Accumulated Depreciation	110.5%	114.7%	120.2%	124.1%	131.6%
Property, Plant & Equipment, net	-67.4%	-71.1%	-76.1%	-79.6%	-86.5%
Intangible Assets, net	43.1%	43.6%	44.1%	44.6%	45%
Depletable Assets, net	15%	15.1%	15.2%	15.3%	15.4%
Investments	0%	0%	0%	0%	0%
Other Assets	8.9%	8.9%	8.9%	9%	9.1%
Total Assets	100%	100%	100%	100%	100%
Liabilities & Net Worth					
Short Term Debt	5.9%	5.6%	5.4%	5.1%	4.8%
Accounts Payable	6.5%	6.2%	5.8%	5.4%	5%
Other Current Liabilities	9.6%	9.2%	8.8%	8.5%	8.1%
Total Current Liabilities	22.1%	21%	20%	18.9%	17.9%
Long Term Debt	27.8%	27.1%	26.3%	25.5%	24.7%
Loans from Shareholders	11%	10.4%	9.7%	9.1%	8.4%
Other Liabilities	5.5%	5.4%	5.2%	5.1%	4.9%
Total Long Term Liabilities	44.4%	42.8%	41.2%	39.6%	38%
Total Liabilities	66.5%	63.8%	61.2%	58.6%	55.9%
Total Net Worth	33.5%	36.2%	38.8%	41.4%	44.1%
Total Liabilities & Net Worth	100%	100%	100%	100%	100%

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(Source: Integra Information, a Division of MicroBilt Corporation.)

Figure 6.11 MicroBilt Corporation's Integra Financial Benchmarking Data Balance Sheet

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Balance Sheet

Prepared for:		SIC:	5812
Date:	8/9/2017	Description:	Eating places
Database #:	2015.2	Sales Range:	\$500,000 - \$999,999
Profile Type:	Industry Profile	Final Year Business Count:	9,105

Balance Sheet	2011	2012	2013	2014	2015
Assets					
Cash	33,140	34,130	35,004	35,198	36,718
Marketable Securities	1,418	1,497	1,575	1,626	1,717
Accounts Receivable less Allowance for Bad Debt	11,231 (22)	11,650 (23)	12,037 (25)	12,199 (25)	12,839 (27)
Accounts Receivable, net	11,209	11,627	12,012	12,174	12,812
Raw Material					
Work in Process					
Finished Goods					
Inventory	8,484	8,609	8,665	8,564	8,750
Other Current Assets	11,586	12,281	12,972	13,444	14,447
Total Current Assets	65,837	68,144	70,228	71,006	74,444
Property, Plant & Equipment less Accumulated Depreciation	244,847 (149,393)	268,340 (166,394)	295,931 (187,425)	315,413 (202,169)	358,644 (235,898)
Property, Plant & Equipment, net	95,454	101,946	108,506	113,244	122,747
Intangible Assets, net	33,295	35,370	37,440	38,883	41,924
Depletable Assets, net					
Investments	19,716	20,890	22,031	22,822	24,697
Other Assets	7,200	7,579	7,951	8,183	8,750
Total Assets	221,501	233,929	246,157	254,139	272,562
Liabilities & Net Worth					
Short Term Debt	13,113	13,194	13,219	12,961	13,165
Accounts Payable	14,508	14,410	14,203	13,698	13,683
Other Current Liabilities	21,308	21,592	21,760	21,475	21,968
Total Current Liabilities	48,929	49,196	49,182	48,134	48,816
Long Term Debt	61,599	63,278	64,665	64,755	67,241
Loans from Shareholders	24,432	24,258	23,902	23,050	23,004
Other Liabilities	12,293	12,609	12,874	12,885	13,356
Total Long Term Liabilities	98,324	100,145	101,441	100,690	103,601
Total Liabilities	147,253	149,341	150,623	148,824	152,417
Total Net Worth	74,248	84,588	95,534	105,315	120,145
Total Liabilities & Net Worth	221,501	233,929	246,157	254,139	272,562

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(Source: Integra Information, a Division of MicroBilt Corporation.)

This is the type of stuff that financial analysts dream about! And it gets better. The next page looks like figure 6.12.

Figure 6.12 MicroBilt Corporation's Integra Financial Benchmarking Data Cash Flow Analysis

integra
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**five year
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Cash Flow Analysis

Prepared for:		SIC:	5812
Date:	8/9/2017	Description:	Eating places
Database #:	2015.2	Sales Range:	\$500,000 - \$999,999
Profile Type:	Industry Profile	Final Year Business Count:	9,105

Analysis of Cash Flow

	2012	2013	2014	2015
Operating Cash Flow				
Net Income	12,579	13,210	13,569	14,659
Adjustments to reconcile net income to net cash provided by operating activities:				
Depreciation and Amortization	16,477	17,801	18,922	20,816
Change in Accounts Receivable, net	(418)	(385)	(162)	(638)
Change in Inventory	(125)	(56)	101	(186)
Change in Accounts Payable	(98)	(207)	(505)	(15)
Change in Other Operating	(474)	(630)	(978)	(606)
Total Adjustments	15,362	16,523	17,378	19,371
Cash Provided by Operating	27,941	29,733	30,947	34,030

Investing Activities

Capital Expenditures	(25,044)	(26,431)	(25,103)	(33,360)
Change in Marketable Securities	(79)	(78)	(51)	(91)
Change in Investments	(1,174)	(1,141)	(791)	(1,875)
Cash Provided by Investing Activities	(26,297)	(27,650)	(25,945)	(35,326)

Financing Activities

Change in Short Term Debt	81	25	(258)	204
Change in Long Term Debt	1,679	1,387	90	2,486
Change in Loans from Shareholders	(174)	(356)	(852)	(46)
Change in Equity	(2,240)	(2,265)	(3,788)	172
Cash Provided by Financing Activities	(654)	(1,209)	(4,808)	2,816

Note: The intent of the Cash Flow Analysis is to reflect operating performance. It does not address investments or changes in capital structure which can vary significantly from firm to firm. When evaluating cash flow, this information should be used in conjunction with specifics around an individual firm's capital structure.

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(Source: Integra Information, a Division of MicroBilt Corporation.)

A cash flow analysis! How cool is that? Hey, if you haven't figured me out yet, I get into this stuff! Deep down inside, I am still an accountant. Just when you thought it could not get any better, look at what comes next (figures 6.13 and 6.14 on the following pages)!

Figure 6.13 MicroBilt Corporation's Integra Financial Benchmarking Data Ratios

Integra
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Ratios

Prepared for:		SIC:	5812
Date:	8/9/2017	Description:	Eating places
Database #:	2015.2	Sales Range:	\$500,000 - \$999,999
Profile Type:	Industry Profile	Final Year Business Count:	9,105

Liquidity / Solvency	2011	2012	2013	2014	2015
Quick Ratio	0.94	0.96	0.99	1.02	1.05
Current Ratio	1.35	1.38	1.43	1.48	1.52
Days Accounts Receivable		7	7	7	6
Days Accounts Payable		19	19	18	17
Days Working Capital		11	11	12	12
Days Inventory		12	11	11	11
Accounts Receivable to Sales		1.9%	1.8%	1.8%	1.7%
Accounts Payable to Sales		2.4%	2.2%	2.1%	1.9%
Current Liabilities to Net Worth	65.9%	58.2%	51.5%	45.7%	40.6%
Current Liabilities to Inventory	x5.77	x5.71	x5.68	x5.62	x5.58
Cost of Sales to Payables	x17.96	x18.81	x19.76	x20.81	x21.97

Turnover	2011	2012	2013	2014	2015
Receivables Turnover		x53.84	x54.97	x55.69	x58.06
Cash Turnover		x18.28	x18.79	x19.18	x20.17
Inventory Turnover		x31.71	x32.49	x33.08	x34.72
Current Asset Turnover		x9.18	x9.39	x9.54	x9.97
Working Capital Turnover		x34.29	x32.49	x30.67	x29.91
Fixed Asset Turnover		x6.23	x6.17	x6.07	x6.15
Total Asset Turnover		x2.7	x2.71	x2.69	x2.75

Debt	2011	2012	2013	2014	2015
Debt Service Coverage - EBITDA		2.2	2.29	2.37	2.55
Debt Service Coverage - Pre-Tax		2.22	2.32	2.39	2.58
Debt Service Coverage - After-Tax		1.83	1.9	1.97	2.13
Interest Coverage	x4.16	x4.18	x4.2	x4.24	x4.29
Current Assets to Short Term Debt	x5.02	x5.16	x5.31	x5.48	x5.66
Accounts Payable to Total Debt	9.9%	9.6%	9.4%	9.2%	9%
Short Term Debt to Total Debt	8.9%	8.8%	8.8%	8.7%	8.6%
Long Term Debt to Total Assets	27.8%	27.1%	26.3%	25.5%	24.7%
ST Debt plus LT Debt to Net Worth	100.6%	90.4%	81.5%	73.8%	66.9%
Total Debt to Assets	66.5%	63.8%	61.2%	58.6%	55.9%
Total Debt to Inventory	x17.36	x17.35	x17.38	x17.38	x17.42
Total Debt to Net Worth	x1.98	x1.77	x1.58	x1.41	x1.27

Risk	2011	2012	2013	2014	2015
Z Score	2.87	3.05	3.24	3.42	3.62
Fixed Assets to Net Worth	x1.29	x1.21	x1.14	x1.08	x1.02

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(Source: Integra Information, a Division of MicroBilt Corporation.)

Figure 6.14 MicroBilt Corporation's Integra Financial Benchmarking Data Ratios

Integra
reports
five year
industry report



Ratios

Prepared for:	SIC: 5812
Date: 8/9/2017	Description: Eating places
Database #: 2015.2	Sales Range: \$500,000 - \$999,999
Profile Type: Industry Profile	Final Year Business Count: 9,105

Profitability

	2011	2012	2013	2014	2015
Gross Margin	55.1%	55.9%	56.8%	57.7%	58.6%
EBITDA to Sales	6.8%	6.9%	6.9%	7%	7%
Operating Margin	4.2%	4.2%	4.2%	4.2%	4.2%
Operating Cash Flow to Sales		4.5%	4.6%	4.6%	4.7%
Pre-Tax Return on Assets	8.7%	8.7%	8.7%	8.6%	8.7%
After-Tax Return on Assets	5.4%	5.4%	5.4%	5.3%	5.4%
Pre-Tax Return on Net Worth	25.8%	24%	22.3%	20.8%	19.7%
After-Tax Return on Net Worth	16%	14.9%	13.8%	12.9%	12.2%
Pre-Tax Return on Sales	3.3%	3.3%	3.3%	3.2%	3.3%
After-Tax Return on Sales	2.1%	2%	2%	2%	2%

Working Capital

	2011	2012	2013	2014	2015
Working Capital	16,908.0	18,948.0	21,046.0	22,872.0	25,628.0
Working Capital to Sales	2.9%	3.1%	3.2%	3.4%	3.5%
Net Income to Working Capital	70.4%	66.4%	62.8%	59.3%	57.2%
Inventory to Working Capital	50.2%	45.4%	41.2%	37.4%	34.1%
Short Term Debt to Working Capital	77.6%	69.6%	62.8%	56.7%	51.4%
Long Term Debt to Working Capital	364.3%	334%	307.3%	283.1%	262.4%

Operating Efficiency

	2011	2012	2013	2014	2015
Operating Expenses to Gross Margin	92.3%	92.5%	92.6%	92.8%	92.9%
Operating Expenses to Sales	50.8%	51.7%	52.6%	53.5%	54.4%
Depreciation & Amortization to Sales	2.6%	2.7%	2.7%	2.8%	2.9%
Total Assets to Sales	38.2%	38%	37.9%	37.7%	37.6%
Sales to Net Worth	x7.81	x7.27	x6.8	x6.39	x6.04
Sales to Fixed Assets	607.3%	603.1%	598.7%	594.6%	590.9%
Inventory to Cost of Sales	3.3%	3.2%	3.1%	3%	2.9%
Intangible Assets to Sales	5.7%	5.8%	5.8%	5.8%	5.8%
Capital Expenditures to Sales		4.1%	4.1%	3.7%	4.6%

Growth (CAGR 5 Years)

	2015
Sales	5.8%
Operating Income	5.3%
Pre-Tax Profit	5.4%
Net Income	5.4%
Assets	5.3%
Liabilities	0.9%
Net Worth	12.8%

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(Source: Integra Information, a Division of MicroBilt Corporation.)

Two pages of financial ratios, 64 in total, provide the valuation analyst a more detailed financial analysis than he or she could ever have dreamed about. If the analyst cannot analyze the subject company upward, downward, and sideways, then I'm at a loss.

This is probably the most comprehensive product that I have ever seen for this type of information. What I also like about this product is that the ratios are calculated in the manner in which I was taught to calculate them in school. Turnover ratios use the average of the years, rather than only the year-end from one year. *RMA Annual Statement Studies* only calculates the ratios based on the end-of-year figures. It is just not right! However, every so often, I come across a SIC code that Integra does not cover, and so I use RMA or another data provider. When I do, I calculate the ratios in the same manner as RMA or the other data provider so that the comparison is based on consistent data.

The financial ratios even reflect a Z score under the risk category. If you are like me, you are probably wondering what this is. The Z score is a financial distress (or solvency) prediction model. In assessing a company's level of financial distress or solvency, 4 ratios are used together, and each ratio is weighted. The following weighted averages are used: working capital to total assets + net worth to total debt + net worth to total assets + operating income to total assets. A score greater than 2.90 is preferred, and a score less than 1.23 indicates significant risk of bankruptcy. Because you are probably thinking that a valuation analyst probably does not use this stuff, I have included a small section from a recent report that discusses Z scores. See exhibit 6.5.

EXHIBIT 6.5 Z Score Analysis

In order to further analyze The Company's financial condition, the analyst performed a calculation of The Company's "Altman Z-Score" on an adjusted basis. The *Altman Z-Score* is a credit-strength test that gauges a manufacturing company's likelihood of bankruptcy. This methodology was originally devised by Edward Altman, a professor at New York University in the 1960s, for publicly traded manufacturing companies. In 2002, Altman created a revised formula that could be used for private companies, which is shown below.

$$\text{Z-Score} = ([\text{Working Capital/Total Assets}] \times 0.717) + ([\text{Retained Earnings/Total Assets}] \times 0.847) + ([\text{Operating Earnings/Total Assets}] \times 3.107) + ([\text{Book Value of Equity/Total Liabilities}] \times 0.420) + ([\text{Sales/Total Assets}] \times 0.998)$$

In general, the lower the score, the higher the chance of bankruptcy. For example, a Z-Score greater than 3.0 indicates financial soundness, whereas a Z-Score below 1.23 suggests a high likelihood of bankruptcy.¹ Based on The Company's adjusted financial ratios, The Company's Z-Score was calculated as follows:

$$\text{Z-Score} = (-0.097 \times 0.717) + (0.62 \times 0.847) + (-0.14 \times 3.107) + (0.47 \times 0.420) + (0.98 \times 0.998) = 1.21$$

A Z-Score of 1.21 indicates that the likelihood of bankruptcy for The Company is high. The Z-Scores for the Integra peer groups were 3.1, 2.15, and 2.92 for NAICS codes 313210, 313230, and 314999, respectively. The Company's weak Z-Score is further indication that it is basically insolvent and has a high risk of bankruptcy.

Author's Note: The subject company actually filed for bankruptcy a week before trial. It is definitely better to be lucky than good!

¹ See www.investinganswers.com/financial-dictionary/financial-statement-analysis/altman-z-score-5188 (accessed June 1, 2015).

Integra Financial Benchmarking Data can be downloaded to Excel from the Internet. We wrote a macro in Excel that imports the data directly into our valuation model. No more data entry! Another cool thing. As with all databases, there are small annoying inconsistencies that arise from time to time. The valuation analyst must make sure he or she understands these discrepancies before using the data, especially if the analyst is going to be cross-examined in a litigation assignment. If the data does not look right, call the vendor and speak to someone.

Before we move off the topic of financial ratios, one other item needs to be raised. Frequently, the subject company financial statements have to be normalized (discussed in the following paragraphs) for economic adjustments that are necessary to present the subject company from the point of view that the willing buyer would be purchasing. This raises an issue: Should the valuation analyst use the unadjusted or adjusted figures to perform the financial analysis and compare the results against the industry group? The answer depends on the facts and circumstances of the valuation, as well as the nature of the adjustments that are made. Sometimes, we compare both the unadjusted and adjusted to the industry group. How is that for being definitive? All kidding aside, when the adjustments being made are significant enough to change the outlook of the subject company, we are more likely to compare both sets of data and highlight the fact that the adjusted figures are more meaningful for that analysis.

Trend Analysis

The purpose of a trend analysis is to compare the subject company's performance over the past several years. The exact number of years used in the analysis depends on the facts and circumstances of each individual case. Although five years is the number commonly used, it is not always the correct number. Ideally, the period of years should cover a normal business cycle for the subject company. Certain industries may require the analysis to include many more years. There also will be times when the company has changed its operations in the near past, and, as a result, a shorter period will be more meaningful. Always keep in mind that more data, if meaningful, will allow the analyst to perform a more meaningful analysis.

During the trend analysis, the valuation analyst attempts to identify positive and negative trends affecting the company. The valuation analyst should review this data with the goal of determining the future prospects of the company based on historical growth patterns and based on the company's normal operations. This is a good time to identify items that are nonrecurring or excess items that will be removed during the normalization process and not considered in the forecast of future net earnings or cash flows.

Computer spreadsheet programs are an easy and efficient way to set up a trend analysis. The data entry can be viewed year by year to determine what is going on. It is also a good way to make sure that the data entry from year to year is consistent. For example, if there is an expense for four out of five years, what happened in the year that is blank? Did that expense not exist for a particular year, or did the company have two different accountants who classified items differently? Or for that matter, did the person who did the data entry categorize four years as "contribution expense" and the fifth year as "donations?" Obviously, these items should be treated consistently for the analysis to be meaningful.

Operational Analysis

The purpose of performing an operational analysis is to determine information regarding the quality and stability of the earnings or cash flow from the business. The valuation analyst should be mindful that an equity investor is concerned with the ability of the subject company to provide earnings, cash flow, or both, so that he or she will obtain a return on investment (for example, dividends).

Some important components of this process include an analysis of (1) gross profit, (2) discretionary costs, and (3) financial statement consistency.

Gross Profit Analysis

An analysis of the cost of goods sold will provide the valuation analyst with information about the gross profit that the company has been able to achieve. Because the selling price of the goods is dictated by competition, the company's gross profit should be in line with the industry's. The subject company must produce an adequate volume of sales if it is to cover its operating expenses.

A gross profit analysis is also a useful tool for determining if the inventory is properly valued or if there is unreported income. Although there is a difference between a valuation analyst and a forensic accountant, there are times when one professional may perform both functions. Let me share with you an example of how this analysis can affect a valuation. We valued a pharmacy that also sold liquor. The store never took a physical

inventory, and we found out from one of the owners that there was cash payroll. Our gross profit analysis is shown in exhibit 6.6.

EXHIBIT 6.6 Gross Profit Analysis

To account for the significant amounts of cash not recorded by the company, as well as the ending inventory being calculated based on a gross profit percentage rather than a physical valuation, the valuation analyst has recalculated gross profit based on industry gross profit percentages. Using these industry averages, we can estimate the amounts of gross revenue and net income that ABC Drug Stores, Inc. (ABC Drugs), should have had each year.

In order to reflect the gross profit percentage of ABC Drugs, we have relied on industry data from MicroBilt Corporation's Integra Financial Benchmarking Data. To accurately calculate a gross profit percentage, we utilized data from both the drug store industry (SIC code 5912), and liquor store industry (SIC code 5921). The Integra data consisted of 1,050 drug stores with revenues between \$2.5 million and \$5 million, and 3,621 liquor stores with revenues between \$250,000 and \$500,000. The gross profit information is as follows:

Integra Gross Margins	2012	2013	2014	2015	2016
Drug stores	28.00%	27.60%	27.30%	27.00%	26.70%
Liquor stores	25.00%	24.60%	24.20%	23.80%	23.40%

The preceding gross margin percentages are then applied to the percent of revenues ABC Drugs received from the sale of drugs or liquor in each year. The breakdown of ABC Drugs' revenues by type is as follows:

ABC Drug Revenue Breakdown	2012	2013	2014	2015	2016
Drug revenues	91.10%	88.09%	88.58%	87.20%	86.97%
Liquor revenues	8.90%	11.91%	11.42%	12.80%	13.03%

Multiplying the revenue percentages by the industry gross margin figures in each year results in a weighted margin for drugs and liquor. Totalling the two figures in each year results in a weighted gross margin for ABC Drugs based on industry gross margins, and ABC Drugs' revenue breakdown by product type. The margin calculations are as follows:

Gross Margin Percentage Calculation

	2012	2013	2014	2015	2016
Drug margin subtotal	25.51%	24.31%	24.18%	23.54%	23.22%
Liquor margin subtotal	2.23%	2.93%	2.76%	3.05%	3.05%
Gross margin percent	27.74%	27.24%	26.94%	26.59%	26.27%
Gross margin less 10%	24.97%	24.51%	24.25%	23.93%	23.64%

EXHIBIT 6.6 Gross Profit Analysis

After calculating the gross profit margins relative to ABC Drug Stores, the valuation analyst applied a 10 percent discount to those figures in order to account for economic and industry-specific risk related to ABC Drug Stores. Based on the company's operation in a low-income area, which includes a significant number of customers utilizing government prescription plans such as Medicaid and the overall competitiveness of the retail pharmacy industry, especially within the metropolitan region in which ABC Drugs operates, a 10 percent discount was determined to be appropriate.

To account for the significant amounts of cash not recorded by ABC Drugs, as well as the ending inventory being calculated based on a gross profit percentage rather than a physical valuation, the valuation analyst has recalculated gross profit based on industry gross profit percentages. Using these industry averages, we can estimate the amounts of gross revenue and net income that ABC Drugs should have had each year.

Using the calculated weighted gross profit margin percentages, the estimated amount of cost of goods sold, as a percent of revenues, can be calculated. These figures are as follows:

Cost of Goods Sold Percentage Calculation

	2012	2013	2014	2015	2016
Revenue %	100.00%	100.00%	100.00%	100.00%	100.00%
Less: gross profit %	24.97%	24.51%	24.25%	23.93%	23.64%
COGS %	75.03%	75.44%	75.75%	76.06%	76.36%

The preceding cost of goods sold percentages are then used to calculate the gross profit adjustment necessary to reflect the approximate amount of revenue that ABC Drugs should have achieved in each year. The gross profit adjustment for each year is listed in the income normalization table. With the addition of the gross profit adjustment to annual historic revenues and the cash payroll adjustment, the valuation analyst has reasonably calculated the annual revenues ABC Drugs attained each year.

A word of caution if attempting an analysis similar to this one: A good SIC or NAICS code is required for the subject company. I have seen too many valuation analysts use SIC or NAICS codes that have so many unrelated types of businesses included in the data that the results become flawed.

Discretionary Costs

Several items included in the company's income statement may be discretionary and should be investigated by the valuation analyst. Some of the common items to be reviewed are repairs and maintenance (have they been deferred, or are there items that should have been capitalized?), R&D (is the company's policy to continue spending an equal amount on R&D, or is there a measurable payback for past R&D?), and advertising (is the company spending too much for too little?).

An analysis of discretionary costs will almost always be performed by a willing buyer because that individual will be interested in knowing how much of the company's expense structure can be done away with to produce the maximum return to him or her. Because of the synergies that the buyer will bring to the transaction, merger and acquisition valuations will also look to the level of discretionary costs that can be eliminated.

Financial Statement Consistency

Just as an auditor looks for consistency in financial reporting, the valuation analyst should analyze the financial statements for consistency from period to period. The valuation analyst must pay particular attention to the company's accounting policies or possible changes in accounting principles. If the company has an aggressive capital expenditure expensing policy, the company's balance sheet will be understated for those assets

that were expensed, rather than capitalized. Not only does this understate the value of the balance sheet, but it also destroys the usefulness of many of the financial ratios calculated, common size analyses, and cash flow projections.

Consistency should also be investigated during a trend analysis because a review of a spreadsheet of the past several accounting periods may highlight discrepancies that exist between the reporting periods. For example, the data in table 6.2 shows a valuation analyst's review of insurance expenses from 2012–2016.

TABLE 6.2 Review Of Insurance Expenses 2012–2016

	2012	2013	2014	2015	2016
Insurance expense	\$39,888	\$62,255	\$22,984	\$45,977	\$47,395

Reviewing the figures in table 6.2 for consistency reveals that something happened in 2013 and 2014 that warrants further explanation. An inquiry by the valuation analyst determined that in 2013, this “cash basis” company made a \$21,000 insurance payment that was for 2014. The owner decided to accelerate the expense into 2013 so that she could reduce her taxes for that year. Let’s hear it for the matching principle! For non-accountants, the matching principle is a basic accounting convention that says that revenues and expenses should be matched to the appropriate time periods so that the financial results are in the correct period and are reported on a consistent basis.

Financial Statement Adjustments

Before the valuation analyst can determine whether there will be the need to adjust the financial statements, he or she will have to assess the quality of the available financial information. While reviewing the historical financial statements, the valuation analyst must determine the answers to the following questions:

- Are the financial statements complete with all footnotes and supplemental schedules?
- Is there sufficient detail to make the information usable in the comparative analysis to the industry and market data?
- Are the financial statements prepared under generally accepted accounting principles (GAAP) (and, for that matter, does it make a difference)?

Conversion of Cash or Income Tax Basis to GAAP

In assessing the quality of the company's financial statement information, there may be times when adjustments are necessary to convert the information presented to GAAP. More often than not, this will prove to be an accounting exercise that may not add any value to the valuation process. The decision about whether to make this conversion will depend on the information that the valuation analyst will be using for comparison purposes. For example, if the analyst is valuing a medical practice that reports on a cash basis and comparing the practice to other practices reported on a cash basis, why bother going through the exercise of converting the financial statements to an accrual basis? Most likely, the balance sheet will need to be adjusted for accounts receivable and accounts payable, but the impact on the income statement may be relatively immaterial. (I love talking accounting talk!) This will be discussed further in chapter 23, which covers valuing professional practices.

Tax Return Adjustments

There will be many times when a valuation analyst will work from tax returns and not have the benefit of having financial statements (the client is probably too cheap to pay for this level of service). When this occurs, the valuation analyst needs to make the necessary adjustments to account for the different treatment of certain income or expense items between the tax returns and what would have been in the financial statements had they existed. For example, entertainment expenses are only 50 percent deductible on a tax return. But if it's a legitimate expense, 100 percent should be considered in determining net income for valuation purposes.

In order to address the differences between book and tax items, we modified our valuation model to automatically adjust the appropriate lines from the historical data entry that may have been input from the tax returns. We allow the data entry to take place from the tax return, and we set up a separate sheet with formulas to combine those items that require combination. This way we do not have to worry about incorrect formulas and staff messing around with our templates. By the way, we password protect all fields that contain formulas. Nobody messes with my formulas! Even something like a Schedule C (sole proprietorship) should be adjusted for differences in reporting. Make sure that all material items are accounted for.

By the time we get through the tax return data, we produce a financial statement that ties out to the "book income" rather than the "taxable income." This may require certain items to be picked up from Schedule K on an S corporation or partnership tax return or Schedule M-1 adjustments. Once we get to a clean starting point, we are able to consider making any adjustments that may be deemed appropriate for the valuation. By reconciling these various figures, we are also creating a good audit trail for the initial figures. This way, we do not have to worry that a figure was entered incorrectly.

Understanding Financial Statements for Valuation Purposes

Before we go too much further, let's talk about financial statements for valuation purposes. Although this book is published by an accounting organization, many of the readers are not accountants. Although the accountants probably think that they do not need this section, please pay attention to it because it is essential to understanding business valuation. Understanding the financial structure of a business is essential to many of the decisions that a valuation analyst will have to make as he or she proceeds with the valuation process. The balance sheet of a typical business appears in figure 6.15.

Figure 6.15

Assets		Liabilities & Equity	
Net Working Capital	Cash Assets Cash Accounts Receivable Inventory Other Assets	Current Liabilities Accounts Payable Accrued Expenses Income Taxes Payable Other Current Liabilities	Invested Capital
	Fixed Assets Equipment Buildings Land	Interest Bearing Debt (includes current portion and short term notes payable)	
	Other Assets Investments Life Insurance	Stockholders' Equity Preferred Stock Common Stock	
	Intangible Assets Identifiable Non-identifiable		

The assets of a business typically consist of the tangible and intangible assets owned by the company, which include operating assets (those assets that are used in the company's operations); excess assets (those assets that could be used in the operations but are owned in excess of the assets that the company actually needs to operate the business, for example, excess inventory because the business purchased a

large amount to take advantage of a closeout from its supplier); and non-operating assets (those assets that are not and will not be used in the ordinary course of conducting business, for example a personal airplane).

There may also be non-booked or unrecorded assets such as the intangible or other assets that are not recorded on the company's financial statements. Per GAAP, the internally generated assets of the company are expensed and not recorded on the company's balance sheet. There may also be discarded assets or fully depreciated assets that may still have value to the business, such as molds or old equipment.

Types of assets that are generally used in the business include the following:

- *Liquid assets.* These include cash, accounts receivable, securities, short-term notes, and the like.
- *Inventory.* These include raw materials, work in process, and finished goods.
- *Other current assets.* These include additional assets that are expected to be used in the normal operating year of the company (within the next 12 months).
- *Fixed assets.* These are generally considered to be the long-lived assets (machinery, furniture, computers, vehicles, and the like) used in the business. These assets are recorded at their original costs and are then depreciated over their estimated economic or tax lives. They remain at their originally recorded cost basis even if their value increases (such as real estate).
- *Other assets.* These assets generally include additional assets that are not expected to be used in the normal operating year of the company, tangible assets not used in the operations of the business, purchased intangible assets, intellectual property and goodwill, and long-term notes receivable.

The liabilities of the business typically consist of the following:

- *Current liabilities.* These are the short-term obligations generally payable within 12 months by the company. These obligations generally consist of accounts payable, accrued expenses payable, the current portion of long-term debt, payroll payable, and other short-term notes payable.
- *Long term liabilities.* These are the long term obligations generally not payable in the next 12 months. These obligations consist of bank debt, notes payable, mortgages payable, and loans from stockholders.

Liabilities of the company can be interest-bearing and noninterest-bearing obligations. Interest-bearing liabilities include bank debt, mortgages payable, and notes payable and may or may not include loans from stockholders. Noninterest-bearing liabilities include accounts payable, payroll payable, accrued expenses, and often, loans from stockholders. The general characteristics of bank loans, mortgage notes, and notes payable to third parties are that they are secured interests (specific assets are generally pledged as collateral) and they carry terms related to repayment schedules, interest rates, and covenants.

The ownership equity section of the company's balance sheet generally depends on the type of entity we are dealing with. In a sole proprietorship, the owner's investment is generally referred to as the owner's *net worth* or *equity*. The business does not have any retained earnings in the business because the business' profits are considered to belong to the owner. In a partnership, a partner's direct investment is referred to as *partner's equity*. Any profits retained in the business are combined with previous invested amounts into the one partner's equity account. In a limited liability company, the *members'* equity is similar to that of a partnership. Even if it is a single member limited liability company, there is a member's equity. In a corporation, the ownership investment is referred to as *stockholders' equity*. The stockholders' equity is not directly allocated to individual owners in the accounting records. Shareholders' equity consists of paid-in capital in the form of preferred or common stock. This represents the direct investments the stockholders have made in the company. It may also include preferred stocks that generally have preferences on dividends and distributions from the company, meaning that the common shareholders receive their dividends and distributions after the preferred shareholders. Preferred stocks most often have a specified return on investment. The final component of shareholders' equity is retained earnings, or the current year's net income (less any dividends paid) plus all prior years' retained earnings. The equity of the business is the owners' interest in the property after deductions are made for all liabilities.

Here is where the accountants need to stop napping. From a nonfinancial reporting perspective on the components of the balance sheet, assets are listed on the balance sheet from top to bottom in order of liquidity: cash, accounts receivable, inventory, fixed assets, and other assets. Working capital is the difference between the total amount of current assets and current liabilities. *Invested capital* (a non-accounting term) is the sum of the stockholders' equity or partners' or members' equity and the non-seasonal interest-bearing debt. Invested

capital represents the complete financing of the nonworking capital assets of the company. It includes both debt and equity. Interest-bearing debt is referred to as the *debt capital* of the business. The economic return to debt holders is *interest*, and the stockholders' (partners' or members') equity section of the balance sheet is referred to as the *equity capital* of the business. The economic return to equity holders is *profit*. Equity capital and debt capital enjoy different rights and risks and, therefore, generally have very different rates of expected returns.

Liabilities on the balance sheet are presented differently for financial reporting and invested capital analysis purposes. For financial reporting purposes, liabilities are separated into current liabilities (payable in the next 12 months) and long-term liabilities. The short-term portions of long-term debts are recorded in the current assets section along with noninterest-bearing debts like accounts payable and payroll payable. For analyzing a company's invested capital, the liabilities are separated into 2 categories: current liabilities and interest-bearing debt. Long-term debt without interest obligations normally should be adjusted to fair market value, which would, in effect, convert some of the debt repayment to interest expense.

I am going to discuss the concept of invested capital in much greater detail in subsequent chapters, but you need to be introduced to some of this stuff now so that it will begin to make sense later. In order to measure returns on invested capital, the analyst must consider the returns to both equity holders and debt holders. Income differences relate to the return on the difference between equity and debt or interest expense. Cash flow differences relate to the differences in income plus the differences in cash flow related to debt acquisition and repayment. Figure 6.16 shows the differences between equity and invested capital returns.

It is extremely important that you understand the difference between equity and invested capital because you will see that the valuation analyst is faced with the choice of valuing a company using one or the other. The valuation analyst needs to understand what this means in order to do the job properly. But have no fear, I am going to explain it soon.

Figure 6.16

<u>Equity Cash Flow</u>		<u>Invested Capital Cash Flow</u>	
	Revenue		Revenue
less	Cost of sales	less	Cost of sales
less	Operating expense	less	Operating expense
=	Operating income (EBIT)	=	Operating income (EBIT)
less	Interest expense		
=	Pretax income		
less	Income taxes	less	Taxes on EBIT
=	Net income	=	Net operating profit after tax (NOPAT)
plus	Depreciation & amortization	plus	Depreciation & amortization
=	Gross cash flow	=	Gross cash flow
less	Increase in working capital	less	Increase in working capital
less	Capital expenditures	less	Capital expenditures
+/-	Change in debt principal		
=	Equity Net Cash Flow	=	Invested Capital Net cash flow

Analysis of Historical Balance Sheets

Once the valuation analyst is pretty sure that all of the data is gathered and input into some form of spreadsheet program, he or she can use all of the analytical tools that I discussed before to try to understand more about the subject company's operations and its industry. Some of the more frequently encountered issues addressed in the historical balance sheet analysis are included in box 6.3.

Many of these questions can be answered by reading the notes to the financial statements (when they exist); many will also be answered during the management interview.

Analysis Of Historical Income Statements

The income statement analysis is also intended to answer many questions. Some of the more frequent items addressed in the analysis can be found in box 6.4.

Bardahl Analysis

One of the factors that a valuation analyst is often faced with is the determination of how much working capital is required for the

subject company's operations. Frequently, there may be excess working capital, which becomes a non-operating asset (explained shortly). However, there may also be a deficit of working capital, which may become a reduction in the value of the company. There are a

number of ways to analyze the working capital needs of the subject company. One such way would be to review industry data about companies or groups of companies, such as from MicroBilt Corporation's Integra Financial Benchmarking Data. This could give you an idea regarding the norm in the industry. Another way to test the working capital needs comes from a court case titled *Bardahl Manufacturing Corp.*,³ which includes a formula that is easy to build into a spreadsheet program. Exhibit 6.7 presents a Bardahl analysis conducted for a manufacturer of steel products.

BOX 6.3

Frequently Asked Historical Balance Sheet Analysis Questions

- What is the minimum amount of cash or working capital required to operate the company? (See the discussion of Bardahl analysis in this chapter.)
- What is the status of accounts receivable (that is, condition, turnover, bad debt experience, reserve, and aging)?
- What are the amounts, terms, and collectability of officer and employee loans?
- How are inventories valued? How does the company determine inventory quantity and pricing at year-end?
- Does inventory cost include material, freight, labor, and overhead, where applicable?
- What are the company's operating and non-operating assets and liabilities?
- What is the policy for capitalization of property and equipment?
- What depreciation methods and lives are used?
- Have writedowns for obsolescence or costs in excess of net realizable value been made?
- What are the terms of all interest-bearing debt?
- What are the trends in payables and turnover ratios?
- What are the terms of all long-term liabilities?
- Are there any preferences for classes of stock, rights, warrants, or options, among others?

BOX 6.4

Frequently Asked Historical Income Statement Questions

- What is the method of recognizing income and expenses?
- What are the company's sources of income?
- What is the breakdown of the revenues in terms of dollars and percentages? How have these changed during the period analyzed?
- Which of the company's products and services are proprietary? Does this affect income?
- Which products are purchased for resale?
- What are the company's main expenses? How have these changed during the last five years?
- How are expenses allocated to inventories?
- Which of the expenses are fixed, semi-fixed, or variable in relation to sales?
- What are the company's gross margins by product and service?
- Are there any deferred charges? If so, do they have any value?
- Is depreciation included in cost of goods sold?

³ *Bardahl Manufacturing Corp.* (1965), TC Memo 1965-200, PH TCM 65200, 24 CCH TCM 1030.

	A	B	C	D	E	F	G	H
1	BARDAHL - ANALYSIS							
2	HISTORIC							
3								
4								
5								
6								
7		December	December	December	December	December	December	
8		2005	2006	2007	2008	2009	2010	
9								
10	<u>Income Statement Data</u>							
11	Sales	-	7,230,054	7,454,789	6,973,673	4,826,331	5,917,241	
12	Cost of Goods Sold	-	3,256,621	3,199,909	3,060,211	2,085,681	2,409,751	
13	Other Operating Expenses (S, G & A, etc.)	-	3,166,783	3,300,778	2,989,907	2,588,285	2,425,290	
14	Depreciation and Amortization	-	664,777	673,714	439,206	315,223	327,268	
15								
16	<u>Balance Sheet Data</u>							
17	Accounts Receivable	826,636	1,021,129	1,034,257	748,479	468,584	756,782	
18	Inventory	-	-	-	-	-	-	
19	Accounts Payable	453,986	84,784	88,429	66,540	38,988	86,860	
20								
21	Current Assets	6,541,099	7,520,680	4,709,793	5,369,823	5,507,735	6,300,861	
22	Current Liabilities	1,606,912	1,085,490	1,033,699	1,136,278	1,093,820	1,404,637	
23								
24								
25	Inventory Turnover		0.00%	0.00%	0.00%	0.00%	0.00%	
26	Accounts Receivable Turnover		12.78%	13.79%	12.78%	12.60%	10.35%	
27	Accounts Payable Turnover		8.27%	2.71%	2.53%	2.53%	2.61%	
28	Operating Cycle Percentage		4.51%	11.08%	10.25%	10.07%	7.74%	
29								
30	COGS + Other Operating Expenses - D&A		5,758,627	5,826,973	5,610,912	4,358,743	4,507,773	
31								
32	Necessary Working Capital	\$	259,501	\$ 645,570	\$ 575,113	\$ 439,079	\$ 349,036	
33								
34	Actual Working Capital		6,434,623	3,678,094	4,233,545	4,413,915	4,896,224	
35								
36	Excess Working Capital		6,175,122	3,030,524	3,658,432	3,974,836	4,547,188	
37								
38								
39								
40								

Row 25, Inventory Turnover

Row 26, Accounts Receivable Turnover

Row 27, Accounts Payable Turnover

Row 28, Operating Cycle Percentage

**Row 30, COGS + Other Operating Expenses—
Depreciation & Amortization**

Row 32, Necessary Working Capital

Row 34, Actual Working Capital

Row 36, Excess Working Capital

This row is calculated as row 32 minus row 34.

The Bardahl analysis also high (which, in fact, was almost of excess needs to be explained normalization process will be financial information. Needle adjusted financial statement and determine whether the working capital. Just so you with our Bardahl analysis use exhibit 6.8).

	A
1	BARDAHL - ANALYSIS
2	ADJUSTED
3	
4	
5	
6	
7	
8	
9	
10	<u>Income Statement Data</u>
11	Sales
12	Cost of Goods Sold
13	Other Operating Expenses (S,G & A)
14	Depreciation and Amortization
15	
16	<u>Balance Sheet Data</u>
17	Accounts Receivable
18	Inventory
19	Accounts Payable
20	
21	Current Assets
22	Current Liabilities
23	
24	
25	Inventory Turnover
26	Accounts Receivable Turnover
27	Accounts Payable Turnover
28	Operating Cycle Percentage
29	
30	COGS + Other Operating Expenses
31	
32	Necessary Working Capital
33	
34	Actual Working Capital
35	
36	Excess Working Capital
37	
38	
39	
40	

So, what does this calculation do? It calculates the amount of working capital required for a manufacturing company after considering working capital turnover ratios, the level of cash expenses, and the noncash charges. It estimates the amount of working capital that the company needs to sustain itself based on its normal operating results. In the preceding example, the subject company held no inventory balances because raw materials were purchased on an as-needed basis. Because this is a normal occurrence for this company going forward, the Bardahl analysis can still be used to measure the normal level of working capital. If the company was planning on purchasing and storing inventory in the future, a Bardahl analysis based on the historical balance sheet would not be relevant because the company's required levels of working capital would change. As I have said before, no single analysis can be blindly applied to every valuation assignment we work on.

The Bardahl analysis also highlights the high level of excess working capital held by the subject company (which, in fact, was almost completely tied to large amounts of affiliate receivables and payables). Any large excess needs to be explained and adjusted to arrive at a normalized level of operating working capital. This normalization process will be explained in the next section. Exhibit 6.7 uses the subject company's historical financial information. Needless to say, it is important to conduct a Bardahl analysis using the historical and adjusted financial statements. This will allow you to identify potential non-operating amounts of working capital and determine whether the subject company (on a normalized basis) has an adequate or excess amount of working capital. Just so you can see the effect normalization can have on working capital, I have provided you with our Bardahl analysis using the subject company's adjusted historical financial statements (as shown in exhibit 6.8).

EXHIBIT 6.8 Adjusted Bardahl Analysis

	A	B	C	D	E	F	G	H
1	BARDAHL - ANALYSIS							
2	ADJUSTED							
3								
4								
5								
6								
7		December	December	December	December	December	December	
8		2005	2006	2007	2008	2009	2010	
9								
10	Income Statement Data							
11	Sales	-	7,230,054	7,454,789	6,973,673	4,828,331	5,917,241	
12	Cost of Goods Sold	-	3,256,621	3,199,909	3,060,211	2,085,681	2,409,751	
13	Other Operating Expenses (S,G & A, etc.)	-	2,693,038	2,810,709	2,784,589	2,446,877	2,353,940	
14	Depreciation and Amortization	-	34,637	60,078	61,878	61,878	67,343	
15								
16	Balance Sheet Data							
17	Accounts Receivable	826,636	1,021,129	1,034,257	748,479	468,584	756,782	
18	Inventory							
19	Accounts Payable	453,985	84,184	88,429	66,540	38,988	86,860	
20								
21	Current Assets	857,550	1,155,157	1,198,952	930,172	545,987	983,127	
22	Current Liabilities	1,025,449	1,180,483	403,891	480,930	412,576	467,877	
23								
24								
25	Inventory Turnover		0.00%	0.00%	0.00%	0.00%	0.00%	
26	Accounts Receivable Turnover		12.78%	13.79%	12.78%	12.60%	10.35%	
27	Accounts Payable Turnover		8.27%	2.71%	2.53%	2.53%	2.61%	
28	Operating Cycle Percentage		4.51%	11.08%	10.25%	10.07%	7.74%	
29								
30	COGS + Other Operating Expenses - D&A		5,915,022	5,950,540	5,782,922	4,470,680	4,696,348	
31								
32	Necessary Working Capital		\$ 266,548	\$ 659,260	\$ 592,744	\$ 450,355	\$ 363,637	
33								
34	Actual Working Capital		674,969	795,061	449,242	133,411	515,250	
35								
36	Excess Working Capital		408,421	135,801	(143,502)	(316,944)	151,613	
37								
38								
39								
40								

In this instance, we identified the affiliate receivables and payables as being non-operating in nature, and we removed them from the balance sheet. This had the impact of significantly reducing the excess working capital to a more realistic level.

Although the Bardahl formula is not the only manner in which to calculate excess working capital, it is a very useful tool, particularly for manufacturing companies. However, it needs to be modified for other types of companies.

Normalization Adjustments

Once all of the historical financial information has been analyzed, any potential adjustments should be made. Financial statement adjustments, frequently called *normalization adjustments*, are intended to place the subject company's financial information on an economic basis. During this process, a "cleansing" of the financial statements takes place. This cleansing is intended to remove those items that the willing buyer would not necessarily take into consideration in assessing the income or cash flow of the company. Another reason for these adjustments is to make the subject company's financial statements more comparable to either other companies that will be used in the analysis or the industry peer group.

The adjustments made to the financial statements will depend on the valuation approach and on whether a controlling interest or a minority interest is being valued. Because a minority interest may not be able to affect a change in the company's financial position, it may be inappropriate to make such adjustments. For example, if the minority interest cannot set the rent paid by the company to a related entity, an adjustment should probably not be made to the income stream. There may be times, however, that an adjustment of this type might be made for the minority. For example, if the rent is so far from market that it does not reflect the economic substance of the transaction, certain shareholder valuations could warrant an adjustment. The facts and circumstances of whether to make the adjustment, as opposed to a valuation textbook, must dictate what the analyst does. Use common sense and good judgment.

These adjustments are designed to provide better comparability to similar types of businesses or business interests. The normalization process involves adjusting items in the financial statements that are not considered to be normal operating expenses of the subject business. The result should be economic financial statements, rather than those that are GAAP- or tax-oriented. Most often, the normalization adjustments that are made are categorized as (1) comparability adjustments, (2) non-operating or nonrecurring adjustments, or both, or (3) discretionary adjustments.

The term *normalization* has changed in the valuation literature over time. Z. Christopher Mercer, ASA, CFA, distinguishes between different types of normalization adjustments from the literature published previously. Mercer takes what used to be grouped as normalization adjustments and divides them into *normalizing adjustments* and *control adjustments*. In fact, he distinguishes between these two types of adjustments as follows:

- With normalizing adjustments, we attempt to adjust private company earnings to a reasonably well-run, public company equivalent basis. Normalizing adjustments can be further divided into two types to facilitate discussion and understanding. Normalization adjustments are not control adjustments.
- Control adjustments adjust private company earnings (1) for the economies or efficiencies of the typical financial buyer and (2) for synergies or strategies of particular buyers. Control adjustments can therefore also be divided into two types.⁴

Further, Mercer states that

Normalizing adjustments adjust the income statement of a private company to show the prospective purchaser the return from normal operations of the business and reveal a "public equivalent" income stream. If such adjustments were not made, something other than a freely traded value indication of value would be developed by capitalizing the derived earnings stream.⁵

⁴ Mercer, Z. Christopher. *The Integrated Theory of Business Valuation* (Brockton, MA: Peabody Publishing, 2004), 146.

⁵ *Ibid.*, 149. (Analyst's note for clarification: The reference to "capitalizing the derived earnings stream" would also apply to discounting a future benefit stream, whether cash flow or earnings, because the capitalization model is a shortcut that is derived from a discounting model.)

I like Mercer's description of normalization adjustments because it begins to differentiate between the types of adjustments that we encounter in our daily practice. Exhibit 6.9 provides part of an internal form that our firm uses to make certain that the analyst does not overlook the obvious.

EXHIBIT 6.9 Partial Internal Checklist for Normalization

TRUGMAN VALUATION ASSOCIATES, INC. BUSINESS VALUATION INTERNAL CHECKLIST

Company Name: _____

Completed by: _____ Date Completed: _____

INSTRUCTIONS: This form is to be completed and should become part of the working papers. It is intended to ensure that important items are not overlooked. Only the information that is relevant to the valuation should be obtained. If the information is not relevant, write "N/A" in the space opposite the step. If information is missing or incomplete, the analyst should let an officer of the company know before attempting to prepare a valuation report. The "Comments" section on the last page can be used to document problems that were encountered or to highlight unusual matters for discussion with others.

BALANCE SHEET NORMALIZATION

	Yes	No	N/A
Cash			
1. Is there excess cash on the balance sheet?			
Accounts Receivable			
2. Has accounts receivable been included in the balance sheet? If not, why?			
3. Did you tax effect the accounts receivable?			
Inventory			
4. Is inventory included in the balance sheet?			
5. Is it reflected on a first in, first out basis?			
6. Is there any excess inventory?			
Marketable Securities			
7. Are these nonoperating assets that should be segregated?			
8. Have they been reflected at market value as of the valuation date?			
Stockholder Receivables			
9. Are these collectible?			
10. Are they legitimate borrowings or just accounting adjustments?			
11. Have they been written off?			
Fixed Assets			
12. Is there real estate included on the books of the subject company?			
13. Is it a nonoperating asset?			
14. Has it been appraised?			
15. Why hasn't it been appraised?			

EXHIBIT 6.9 Partial Internal Checklist for Normalization

	Yes	No	N/A
Fixed Assets (continued)			
16. Have all corresponding mortgages been treated consistently with the treatment of the real estate?			
17. Have all real estate related expenses been segregated on the income statement for possible normalization adjustments along with rent expense?			
18. Have machinery and equipment, furniture and fixtures, vehicles, and other items been appraised?			
19. If not, did we use our depreciation template to estimate fair market value?			
20. Do we need to make a depreciation adjustment on the income statement?			
21. If there is high appreciation in these assets, have we considered taxes in our analysis?			
Other Assets			
22. Did we write off intangible assets that will be revalued?			
23. Do we know what all of the assets represent in this category?			
Accounts Payable			
24. Did we include accounts payable on the balance sheet?			
25. Did we tax effect it?			
Notes Payable			
26. Are these notes at market rates of interest?			
27. Have noninterest bearing notes been reflected at FMV?			
28. Are any of the notes considered to be nonoperating?			
29. If notes are high, did we consider using a debt free approach?			
30. Does the debt-equity relationship compare to the industry data to allow a reasonable analysis to be performed?			
Stockholder Payables			
31. Are these legitimate?			
32. Should they be reclassified as equity?			

INCOME STATEMENT NORMALIZATION

	Yes	No	N/A
1. Was officer's compensation adjusted?			
2. If yes, did you consider if any adjustment was required due to retirement plan contributions?			
3. Are there officer's perquisites that need to be adjusted?			
4. Are there any nonworking family members on the books?			
5. Are there any other payroll adjustments necessary (for example, maid)?			
6. Have you considered the reasonableness of the following:			
a. Automobile expenses			
b. Travel			
c. Entertainment			
d. Non-arm's length rent leases			
e. Depreciation			
f. Interest expense			

(continued)

EXHIBIT 6.9 Partial Internal Checklist for Normalization (continued)

	Yes	No	N/A
7. Have you added back federal taxes before recalculating taxes on the adjusted income?			
8. Have you added back state and local taxes before recalculating taxes on the adjusted income?			
9. Have you adjusted all nonoperating income and expense items?			
10. Have you adjusted all non-recurring income and expense items?			
11. Have you made generally accepted accounting principles adjustments to make the statements more comparable to the guideline companies?			
Comments. (This section may be used to document problems that were encountered or to highlight unusual matters for discussion with others.)			

Comparability Adjustments

Certain types of adjustments are designed to make the subject company more comparable to the guideline companies or industry group being used as a means of comparison. For example, if the subject company uses last in, first out inventory accounting, a switch to first in, first out (FIFO) may allow the valuation analyst to compare the balance sheet of the subject company with those of the guideline companies more appropriately if the guideline companies are using FIFO. Depreciation methods are another type of adjustment that fall into this category. In some instances, even officers' compensation can fall into this category. This is especially true when the officers of the closely held business are taking a level of compensation out of the business that is dramatically different from the market. I will address this in more detail in a little while.

Non-Operating and Nonrecurring Adjustments

According to the *International Glossary of Business Valuation Terms*,⁶ the definition of a *non-operating asset* is an asset that is "not necessary to ongoing operations of the business enterprise." This can also be the case for a non-operating liability. Many times, these assets or liabilities, or both, have income and expenses associated with them. An example of a non-operating asset is a condo in Myrtle Beach, South Carolina that is owned by ABC Shoes, Inc., a shoe store in Miami, Florida. ABC also has a mortgage against this property, which makes this a non-operating liability. Included in the income statement are the rental income and expenses associated with the condo. If our assignment was to value the common stock of ABC Shoes, Inc., we would first remove the asset and related liability from the balance sheet. Next, we would remove all income and expense items that relate to these non-operating assets and liabilities. We can now value the operations of the shoe store as a standalone business. However, because valuing the equity of the company is our assignment, we must then add back the fair market value of the non-operating asset and subtract the fair market value of the non-operating liability. After all, the buyer may purchase only the operations, but the equity includes all assets and liabilities.

⁶ AICPA; *International Glossary of Business Valuation Terms*. AICPA, NY: 2008.

Another type of non-operating asset that is commonly encountered in a business valuation assignment is real estate that is owned by the business but that does not necessarily have to be part of the business. For example, a corporation that operates a restaurant and owns the real estate that the restaurant is housed in does not need to own the real estate. Therefore, in this type of situation, it is common to treat the real estate as a non-operating asset, build a fair rent into the normalization of the income statement, and value the operating entity as if it were renting its facility. There is no reason that a restaurant could not rent its premises, therefore, the real estate is a separate asset that should be valued apart from the operating entity. What the valuation analyst has to pay close attention to are those types of businesses in which the real estate is an integral part of the business. Some examples of this include funeral homes, ski lodges, and many manufacturing businesses.

Nonrecurring items are also adjusted during the normalization process because the willing buyer would not expect these income or expense items to be pertinent to him or her in the future. An example of a nonrecurring item would be a one-time \$1 million contract that resulted in a net profit of \$350,000. Because the willing buyer would not expect to realize the benefit of this contract, it should be adjusted.

Discretionary Adjustments

The last group of adjustments that I will discuss is the most common type of adjustments made for small- and medium-sized businesses. Although some of these adjustments will be applicable to larger companies as well, they will more frequently be applicable to the smaller ones. *Discretionary adjustments* are those items that relate to expenses that are solely at the discretion of management, generally, the owners. Some of the more common items include the following:

- Officer's and owner's compensation
- Owner's perquisites
- Entertainment expenses
- Automobile expenses
- Compensation to family members
- Rent expenses (if not an arm's length lease)
- Interest expense
- Depreciation expense

There also may be other items included in this list, although you will probably find that the preceding items are the most common. Let's discuss each one so that you can gain a better understanding of why we make these adjustments. Remember that most of these adjustments will be appropriate only when controlling interests are being valued. However, there may be times when some of these adjustments may be appropriate for minority interests, as well. I will discuss this in more detail later.

Officer's and Owner's Compensation

Smaller businesses frequently pay their officers or owners an amount equal to what the officers need to live, or what the businesses' accountants tell them to pay to reduce taxes. A common tax planning technique used among smaller businesses is to bonus out profit at the end of the year to eliminate taxable income. For certain types of businesses, for example, S corporations, the owner may choose to reduce his or her salary below market levels and merely distribute the profit because it will be taxed as ordinary income anyway. By not taking salary, the owner is saving payroll taxes. For partnerships, limited liability companies, and sole proprietorships, there may be no salary taken at all. In these entities, distributions or draw is often the manner in which the owners remove money to live on. Sometimes, businesses are doing so poorly that they cannot afford to pay their officers a reasonable wage. Keep in mind that the owner of a closely held business receives two forms of compensation. First, as an employee, that individual is entitled to a return on his or her labor (salary for the job being performed). Second, as an owner, that individual receives a return on investment (dividends or capital appreciation). Be very careful not to confuse the two.

The officer's compensation adjustment is intended to restate the economic income statement of the company to a basis that includes the amount of salary that would be necessary to attract others who are qualified to perform the duties required by the company. I usually put myself in the position of an investor who will have to hire a replacement for the present management. How much will I have to pay to replace management going

forward? Many factors should be considered in the determination of reasonable compensation. Among others, consider the types of duties, education, experience, the number of hours worked, and the geographical region of the country.

Further guidance for reasonable compensation can be obtained from tax court cases in which reasonable compensation was an issue. I stated this in the last three editions of this book, and I still believe it to be true that one of the best constructed judicial opinions in this area can be found in *Mad Auto Wrecking, Inc. v. Commissioner*.⁷ This opinion is discussed in greater detail in chapter 27. In this opinion, Judge Laro addressed, one by one, many points that eventually led to the allowance of what would otherwise seem to be a substantial amount of compensation for the two officers in an auto salvage business that had gross revenues of about \$2 million. But as good as this case is, keep in mind that the requirements for compensation to be a deductible expense under Section 162 of the IRC (deductibility for income tax purposes) is different than the criteria to determine a reasonable level of compensation for the officers of the business on a prospective basis.

Where do you look for reasonable compensation? I've been wishing for the past few years that someone (other than me) would write a book on that subject! Well, guess what? Someone did. Kevin Yeanoplos and Ron Seigneur wrote a book for Business Valuation Resources called *Reasonable Compensation: Application and Analysis for Appraisal, Tax and Management Purposes*. If researched and analyzed properly, this can be a time-consuming exercise. Reasonable compensation can be obtained from numerous sources. Some are easier to find than others. I prefer salary surveys that break out the levels of compensation by individual, rather than as a percentage of revenues. As the valuation analyst performs industry research, it is generally a good idea to inquire whether the trade organization has a salary survey. That is always a good starting point. The best bet will be to compare the officers of the subject company with officers of other companies in the same industry. If the company is large enough, salary disclosure information from the proxy statements of public companies can be used.

If this information cannot be narrowed down from the trade associations, another good alternative is other types of salary surveys. However, I can't really say that we go to any book on a regular basis that is applicable to all of our valuations. In fact, there are very few books in our library that we go to for compensation information more than a handful of times throughout the year.

It seems that surveys for professional salaries are more readily available than corporate salaries. We finally broke down and subscribed to the Economic Research Institute's (ERI's) Salary Assessor database. Talk about pricy; it is \$2,389 per year for a single user license. However, ERI is a well-known database used by the IRS in reasonable compensation determinations. It has all types of neat stuff in it, but it hurts to write the check every year. I just don't sell enough copies of my book yet! However, even when we use this service, there are deficiencies that we encounter. Like anything in our field, its usefulness depends on the facts and circumstances of how we are using it, as well as what we are using it for.

Then, there are industry-specific resources. Some of the more common ones that we use include the following:

- AICPA Small CPA Firm Compensation Survey—accounting firms
- BAI Bank Compensation Study—banks
- DataMasters Computer Industry Salary Survey—IT professionals
- LawJobs—lawyers
- In-House Counsel Average Salaries—more lawyers
- General Counsel Salary Survey—more lawyers
- Survey of Law Firm Economics (Altman Weil & Pensa)—a lot more lawyers
- Medical Devices—medical device and diagnostic industry

⁷ *Mad Auto Wrecking, Inc. v. Commissioner*, T.C. Memo 1995-153, RIA T.C. Memo P. 95153, 69 CCH TCM 2330.

- *PAS*—construction industry
- *Physicians Search*—free salary information based upon a bunch of salary surveys conducted by the Medical Group Management Association and the American Medical Association, among others, and did I say doctors?

Other sources of compensation include business journals, specialized salary surveys published by employment agencies, and employment agencies. Don't be afraid to make telephone calls to executive recruiting firms or headhunters to find out what compensation a specific position would command in the marketplace. If we use headhunters, we generally call two or three firms so that we can try to get a consensus of opinion. The valuation analyst should make sure to carefully document his or her sources.

As a last resort, I will use publications such as *RMA Annual Statement Studies* and similar publications, or I might even go to MicroBilt Corporation's Integra Financial Benchmarking Data. It is not that these options are bad, but they present officer's compensation as a percentage of revenues based on the financial information that they accumulate. It is not possible to answer questions about how many officers were surveyed or what part of the country the data is from. This information can be useful, however, as a means of spot-checking other sources for reasonableness. Exhibit 6.10 shows a section from an actual report that addressed reasonable compensation. There is another example included in exhibit 6.11 further along in this chapter.

Owner's Perquisites

During the analysis of the company's financial statements, pay close attention to owner's perquisites. Many business owners will take as much income as they can out of their businesses, whether as salary or as fringe benefits (perks). These perks can range from retirement plans, life insurance, and disability insurance to health club memberships and sky boxes at sporting arenas. After all, why own a business if you can't enjoy the fruits of your labor? Well, besides the fact that many of these items are often buried so that our friends at the IRS (one hopes) will not find them, they are also considered to be another form of compensation to the owner of the business.

Part of the normalization process involves removing those items that are considered discretionary, which do not necessarily have to be paid to someone else who would be hired to replace the owner. If the company has a retirement plan, a health insurance plan, a life and disability insurance plan, or other fringe benefit plans that are offered to all other employees, these items may not be considered a normalization adjustment. However, if the owner is getting a greater benefit than everyone else, a partial adjustment may be required. Whether you add back these expenses may also depend on the salary survey that you use to determine reasonable compensation. Sometimes, the surveys include not only base salary information, but also total compensation, including perks. Be careful of double counting!

Entertainment Expenses

Entertainment expenses are reasonable and necessary expenses for many businesses. However, we all know that many business owners deduct entertainment expenses that really do not have anything to do with the business. There may be times when the amount of entertainment expense differs significantly from industry data. In this situation, the valuation analyst must investigate the reason for the differences. Ask yourself: Would the willing buyer have to spend that much on entertainment? If you answer "No," you probably need to consider an adjustment. For some reason, I see this happen frequently when we value medical practices. Specialists seem to have an incredible amount of entertainment on the books. When was the last time your doctor took you to lunch? Although they have some legitimate meetings with colleagues, many of the entertainment expenses are really perks.

EXHIBIT 6.10 Reasonable Compensation

An estimate of reasonable compensation was made for services rendered by the officers of the company. In order to estimate this amount, several sources were reviewed.

Public companies that were considered similar to ABC Company were analyzed to determine the level of compensation being paid to officers. We analyzed this data by dividing it among all of the publicly traded guideline companies from our search under the market approach (explained later in this report) and those companies with revenues under \$200 million. This was intended to get closer to the size of the company. Data was also gathered from the ERI Executive Compensation Assessor database, a database frequently used by the IRS.

The data compiled from these sources was as follows:

	2014	2015	2016
Public Co. Proxies: Percentage of Revenues (All companies)			
Average	0.45%	0.42%	0.38%
Median	0.32%	0.29%	0.32%
Options (% of companies with options)	59.00%	52.00%	65.00%
Public Co. Proxies: Percentage of Revenues (Under \$200 million)			
Average	0.69%	0.63%	0.62%
Median	0.58%	0.64%	0.73%
Options (% of companies with options)	50.00%	33.00%	50.00%
Median comp. per officer			
All companies	\$308,447	\$319,908	\$ 361,765
Under \$200 million	260,425	241,603	232,783
Compensation for 3 officers			
All companies	\$925,341	\$959,724	\$1,085,295
Under \$200 million	781,275	724,809	698,349
ERI (based on \$150 million)			
CEO			\$ 493,087
President			324,387
Vice President			229,324
			<u>\$1,046,798</u>
As a % of Revenues			<u>0.70%</u>

EXHIBIT 6.10 Reasonable Compensation

The ERI data is relatively close to the level of compensation indicated that is based on all of the public companies that were analyzed. Although the level of compensation is greater than the compensation for the "Under \$200 million" group, the analyst believes that the greater profitability of ABC Company can support a higher level of compensation. Also, the public companies, on occasion, provide stock options as an additional feature of officers' compensation.

As a result of this analysis, the analyst believes that compensation can reasonably be reflected at \$1.047 million for the most recent year. We have then deflated prior years by 3 percent.

Automobile Expenses

Once again, be on the lookout for automobile expenses that are not business related. There are many businesses that require a vehicle for business use. However, the adjustments made during the normalization process are intended to remove the expenses related to nonbusiness vehicles (such as the husband's, wife's, son's, daughter's, boyfriend's, aunt's, uncle's, or cousin's). Don't forget to look at other line items on the income statement besides automobile expenses for the total expenses attributable to the vehicle. Automobile insurance may be in insurance expense. Automobile repairs may be in repairs and maintenance. Gasoline may be in utilities. Make believe that you are playing hide and seek!

Sometimes, the automobile will be a necessary business expense, but the type of vehicle may cause the expense to be excessively high. In this situation, the valuation analyst should try to estimate the normal vehicle expenses for the business. Similar companies can be a good source for this data. My all-time favorite automobile adjustment came as a result of the valuation of a two-doctor neurosurgery practice. Each doctor had a Lamborghini on the books (at an average cost of \$155,000). When I questioned the doctors about the need for these expensive cars, they told me that in the event of an emergency, they needed to get to the hospital fast! Despite my laughing hysterically, I normalized the expense.

Compensation for Family Members

There is nothing wrong with family members working for the business, as long as they really show up and their pay is reasonable for the services that they render. Frequently, the spouse is on the books so that a contribution can be made to an individual retirement account, although no services are rendered for the compensation. (Well, that may not be the spouse's position on the services that are rendered! Certainly, no business services were rendered.) In other situations, children are on the books as a means to get spending money and college expenses to them in a lower tax bracket. When family members work for the business, the valuation analyst should check to see if the amount of compensation would be the same if it were paid to a nonfamily member. If my daughter performs secretarial services for my firm, she should not be compensated as the chief financial officer. Heck, I do not even get compensated that well!

Rent Expense

Frequently, closely held businesses operate in a facility that is owned by the owners or a related entity and is leased to the business establishment. This is not a problem if the lease is at a market rate of rent. More often than not, the rent being charged is based on the mortgage payment that the owner is required to make. A market rental analysis should be obtained by the valuation analyst to support the fair rental value of the premises. This can be obtained from a real estate appraiser or a local realtor who is familiar with market rents in the area for that type of property. Another factor to consider, although not necessarily a normalization adjustment, is if a business is operating without a lease. Rent may be paid to an unrelated landlord at market rates, which would not require an adjustment to be made, but the risk associated with not having a lease should be built into market multiples, capitalization rates, or discount rates. Also, consider the difficulty of selling the business to a willing buyer if a lease cannot be obtained. This could cause the business to be less marketable.

Interest Expense

An adjustment for interest expense may depend on whether the valuation analyst is valuing the equity of the company or the invested capital of the company. In an equity valuation, the interest expense adjustment may relate only to interest paid on non-operating liabilities. This could be interest on the mortgage on the condo in Myrtle Beach that we discussed previously. Because the asset was considered to be non-operating, all associated income and expenses, including interest, should be removed during the normalization process. The valuation analyst also must pay attention to loans from the owners of the business. If no interest is being paid to the owners, but the loans are legitimate loans in lieu of bank financing, the valuation analyst may need to impute interest expense as a normalization adjustment. On the other hand, if the interest being paid to the owners is excessive (12 percent when prime is 3.5 percent), an adjustment to reduce the level of expense may be warranted.

The valuation analyst should also pay attention to sizable amounts of interest related to debt used to finance excessive compensation and perks. A company may be borrowing for working capital and using the proceeds of the debt to pay the owners. A willing buyer would not be expected to incur this debt; therefore, it should be removed during the normalization process.

When the valuation analyst values the invested capital of the company, the interest is added back to determine the earnings available to the invested capital holders. This can be useful when the valuation analyst values companies that have different capital structures from those of the guideline companies. This is not truly a "discretionary" adjustment, but the discretion is on the part of the valuation analyst to value the equity or the invested capital. There is more about this in chapter 9.

Minority Interest Valuations

The conventional wisdom in business valuation is that the valuation analyst should not make adjustments to the financial statements that could not otherwise be made by the interest being valued. For example, the minority interest owner cannot determine the level of compensation for the officers of the company. However, with that being said, let's be practical when we consider the appropriateness of the adjustments for the assignment at hand.

Would it be reasonable to ignore an adjustment for officer's compensation in the following circumstance? A parent owns and runs a business, takes \$1 million out of the company as salary (when the market rate of salary is \$200,000 for those services), and reduces the profits of the company to \$0. The purpose of the valuation is for a 10 percent gift to the child of the owner. First of all, the answer is NO. It does not matter under fair market value whether the gift is to the child or not. Under these circumstances, in most jurisdictions, a 10 percent owner, child or not, could probably bring an oppressed shareholder lawsuit against the controlling owner. Stripping the business of any dividend-paying capacity for the benefit of the controlling owner and denying the minority of dividends would constitute oppression, in my non-legal opinion. The legal remedy, at that point, might be for the minority owner to be bought out at *fair value*, providing a value based on the *control* value of the interest, rather than the *minority value*. This would require the valuation analyst to make the adjustment for compensation and value the entity based on its true profitability.

In other circumstances, it may be necessary to make certain adjustments to make the company appear more comparable to the guideline companies. If the controlling shareholder is taking too little salary out of the company and chooses to take S corporation distributions instead, a proper comparison to publicly traded C corporations may require a salary adjustment even for a minority valuation.

What I am saying is use your head. Do not just blindly ignore adjustments because the valuation literature indicates that the valuation analyst does not make adjustments for the minority. There may be facts and circumstances that require reasonable adjustments to be made. Remember that Mercer distinguishes between normalization adjustments and control adjustments. The financial statements may need to be normalized, and the adjustment should not be considered a control adjustment. In chapter 11, I indicate that the asset-based approach is generally not applicable for minority interests that cannot cause the liquidation of the assets to get

at the value of those assets. However, we use an asset-based approach frequently when valuing family limited partnerships, many of which are being valued for gifting of minority interests. Like I said, there are very few, if any, absolutes.

Exhibit 6.11 contains a sample normalization section from an actual valuation report.

The example shown in exhibit 6.11 is a good illustration of the normalization process because it shows many of the abuses that a closely held business owner tries to get away with. Many closely held business owners are not too terribly different from the client in this assignment. This is one of the factors that makes this business so much fun. And by the way, the owner of the business was our client.

Once the financial statements have been normalized, the valuation analyst uses the adjusted information as a basis for the valuation. This information can then be used to forecast the future operating results of the business and analyze the economic return to the owner. The valuation analyst should not use an average of the historical figures unless the outcome reflects the anticipated financial results of the valuation subject. Remember, valuation is a prophecy of the future!

As a general rule, I like to use the adjusted figures in addition to the unadjusted figures when performing my ratio analysis. This gives me not only the unadjusted ratios that can be compared with similar data, but also the adjusted figures that can be used to assess the economic future of the company. This becomes an easy task if you use computer templates that you write yourself.

EXHIBIT 6.11 Sample Normalization Section from a Report

The next step in the valuation process is to normalize the income statement. The normalization is shown in table 4.

TABLE 4 Normalization of Income for the Years Ended December 31

	2013	2014	2015	2016
Historic Net Income (Schedule 2)	\$ 98,550	\$ 82,213	\$ 89,662	\$ (26,315)
Adjustments				
Revenues ¹		16,308	7,119	27,648
Inventory Adjustment ²	—	—	292,272	(292,272)
Smith Manufacturing ³	46,741	42,715	70,555	34,723
Interest Expense ⁴	—	—	10,600	10,686
Officers' Compensation—Addback ⁵	148,400	215,700	86,400	158,400
Officers' Compensation—Reasonable ⁶	(205,351)	(211,703)	(218,250)	(225,000)
Professional Fees ⁷	81,115	—	—	21,399
Moving ⁸	14,671	1,500	—	—

(continued)

EXHIBIT 6.11 Sample Normalization Section from a Report *(continued)***TABLE 4 Normalization of Income for the Years Ended December 31**

	2013	2014	2015	2016
Auto Expenses—Addback ⁹	23,433	28,045	18,611	35,042
Insurance—Automobiles ¹⁰	3,515	4,703	4,824	4,658
Insurance—Other ¹¹	10,380	11,890	10,350	15,381
Credit Cards ¹²	56,007	72,755	62,496	51,036
Payments to Susan & Greg Johnson ¹³	44,194	25,474	15,941	21,339
Health & Company Life Insurance ¹⁴	6,754	7,907	9,478	10,351
Telephone ¹⁵	4,441	4,942	2,593	2,636
Miscellaneous ¹⁶	7,100	11,895	8,455	8,501
Loss on Sale of Assets ¹⁷	—	24,264	—	—
Historic Income Taxes ¹⁸	58,286	43,263	41,615	(25,140)
ADJUSTED PRETAX NET INCOME	\$398,236	\$381,871	\$512,721	\$(166,926)
Income Taxes ¹⁸	149,856	143,698	192,937	(53,952)
ADJUSTED HISTORIC NET INCOME	\$248,380	\$238,173	\$319,784	\$(112,975)

1. John Johnson deposited monies received from a vendor in his personal account instead of in the business. This adjustment is intended to show these monies as company revenues.
2. In 2015, an outside inventory service was hired to take a physical inventory. However, they missed some inventory that was written off in 2015. The amount of the error was \$292,272 and was corrected in early 2016. As a result of this error, 2015 net income was understated, and 2016 net income was overstated.
3. Smith Manufacturing was set up to do embroidery work for the company until May 2016 when it was merged into the company. During conversations with Mr. Johnson, he indicated that while the market rate was about \$0.10 per piece for embroidery, the company was paying between \$0.15 and \$0.25 per piece. A hypothetical willing buyer would not incur this additional expense over the market rate. Therefore, this overage must be added back to bring this expense back to a fair market rate.

We were provided with a report showing all payments to Smith Manufacturing for the period 2013 through 2016. We applied a market rate percentage to the amounts based on the difference between what the company was paying compared to what the market was paying. This was calculated as follows:

Market piece price	\$ 0.10
What the company paid (average of \$0.15 and \$0.25)	\$ 0.20
Market rate percentage	$0.10/0.20 = 50\%$

EXHIBIT 6.11 Sample Normalization Section from a Report

This market rate percentage was then applied as follows:

	2013	2014	2015	2016
Net payments to Smith Manufacturing	\$93,482	\$85,429	\$91,111	\$69,446
Market rate percentage	50%	50%	50%	50%
Adjustment	\$46,741	\$41,715	\$45,555	\$34,723

In 2015, there was an unidentified payment of \$25,000 made by the company to Smith Manufacturing. With no support for this payment, it has been added back in its entirety. This brings the net adjustment in 2015 to \$70,555.

4. This is the interest associated with the non-operating shareholder loan. It is added back because a hypothetical buyer would not incur this expense.
5. Officer's compensation has been added back in its entirety because a reasonable level of compensation has been determined in number 6 below.
6. In order to estimate the amount of reasonable compensation, several sources were reviewed. *Executive Compensation Assessor*, a database available from Economic Research Institute, was the first source. We searched this survey for companies classified under SIC code 5023 in Miami, Florida, with sales between \$5,000,000 and \$20,000,000. We did not find any usable data in this database.

We then looked at the National Compensation Survey—December 2016 published by the U.S. Department of Labor. We reviewed data for private industry workers: mean hourly earnings for full-time and part-time workers by experience levels in Miami-Fort Lauderdale, Florida. Within this group is a subset called Management Occupations, with the highest work level in this subject being level 12. The hourly rate given was converted to an annual figure using 2,080 hours and is shown as follows.

\$ 96.92	per hour
× 2,080	hours
\$201,594	

We also reviewed salary information located at salary.com. This database provided total compensation (salary, bonuses, and benefits) for a top operations executive. The complete package amounted to \$349,701, consisting of salary of \$217,416, bonuses of \$65,065, with the balance representing other fringe benefits.

Finally, we reviewed MicroBilt Corporation's Integra Financial Benchmarking Data, which provides officer's compensation by SIC code as a percentage of sales. Officer's compensation for businesses operating in SIC code 5023 with sales between \$10 and \$25 million included an average compensation from 295 businesses at 2.2 percent in 2016. Using the company's 2016 revenues results in the following:

2016 Revenues	\$ 11,122,116
Officer's compensation as % of revenues	× 2.2%
Officer's compensation	\$ 244,687

(continued)

EXHIBIT 6.11 Sample Normalization Section from a Report *(continued)*

Recognizing that this SIC code is extremely broad, we believe that compensation can be considered from this data because it includes 295 businesses within the sales range of the company. It is also within the range of the other sources we reviewed.

As a result of our analysis, we believe that reasonable compensation should be estimated at \$225,000 with prior years being deflated by 3 percent.

7. Professional fees were materially higher in 2013 and 2016 as compared to the other years. An adjustment was made to reflect a more normal level of expense based on an average of the other years. These calculations are as follows:

2011	\$ 26,913
2012	27,228
2014	30,173
2015	20,320
Total	104,634
	÷ 4
Average expense	\$ 26,159

This average expense was then subtracted from the actual expense in 2013 and 2016 to arrive at the adjustment amount. This is shown in the following table:

	2013	2016
Actual expense	\$107,274	\$47,558
Average expense	26,159	26,159
Adjustment amount	\$ 81,115	\$21,399

8. Moving expenses are considered nonrecurring in nature and, therefore, are added back.
9. Auto expenses include car payments and other auto-related expenses for the Johnson family, as well as other employees. Legitimate business expenses were considered to be all expenses paid for Robert Jones (unrelated sales manager), and one car for John Johnson. Our addback is calculated as follows:

EXHIBIT 6.11 Sample Normalization Section from a Report

	2013	2014	2015	2016
Total auto expense	\$46,122	\$45,861	\$35,959	\$53,111
Less: auto leases				
Robert Jones	5,868	5,868	6,265	6,464
John Johnson	7,365	8,635	10,412	10,123
Less: auto expenses				
Robert Jones	106	—	—	—
Net auto expense	\$32,784	\$31,358	\$19,282	\$36,524
Other lease payments ^A	14,083	24,732	17,941	33,559
Net operating auto expenses	\$18,701	\$ 6,626	\$ 1,341	\$ 2,965
Allowable portion (50%)	9,350	3,313	671	1,483
Disallowed portion ^B	\$ 9,350	\$ 3,313	\$ 671	\$ 1,483
Addback ^{A+B}	\$23,433	\$28,045	\$18,611	\$35,042

A Total lease payments from the general ledger less the leases listed above.

B Since most of the remaining expenses pertain to John and Elizabeth Johnson, we have considered only one-half to be a necessary business expense.

10. Included in insurance expense are premiums related to the vehicles that were adjusted for as shown previously.
11. Various other insurance policies were paid by the company on behalf of the Johnsons. These expenses are summarized as follows:

	2013	2014	2015	2016
Homeowners, flood and disability	\$ 3,983	\$ 4,040	\$ 1,137	\$ 1,909
Officer's life	6,397	7,010	9,213	13,472
Auto, Greg Johnson (son)	—	840	—	—
Totals	\$10,380	\$11,890	\$10,350	\$15,381

(continued)

EXHIBIT 6.11 Sample Normalization Section from a Report *(continued)*

12. Credit card statements were reviewed and nonbusiness-related expenses were added back because these monies would be available to a willing buyer. The summary of our analysis is as follows:

	2013	2014	2015	2016
Specifically identified ^A	\$44,574	\$43,598	\$41,545	\$35,599
Estimated items ^B	398	455	—	—
Unidentified payments ^C	—	15,133	—	—
Costco ^D	7,645	9,446	14,546	12,165
Sam's Club ^D	3,206	4,074	6,405	3,251
Lands' End ^E	183	48	—	22
Total adjustment	\$56,007	\$72,755	\$62,496	\$51,036

- A. These items were specifically identified as being personal in nature. We reviewed every available credit card statement with management for the years 2013–2016. Some of the items that were considered as nonbusiness-related were as follows:
- Restaurants around the family residence
 - CVS Pharmacy
 - Nail salon
 - Animal hospital
 - Various clothing stores
 - Grocery stores near the family residence
 - Trips to Jamaica
- B. Over 230 credit card payments and the accompanying statements were analyzed to separate personal from business expenses. Only 2 statements are missing in the amounts of \$478 and \$628. We estimated the personal amount by the relationship between business and personal charges in those particular years.
- C. The unidentified amount consists of three payments made to credit cards that were not identified as business cards.
- D. In our discussion with management, it was indicated that a majority of charges at Costco and Sam's Club were personal in nature. After further discussion with management, 80 percent of charges were considered to be personal.
- E. Some items purchased at Lands' End (towels) were business-related. In order to account for this, 50 percent was added back. Overall, this amount was immaterial.
13. Wages paid to family members would likely not be incurred by a hypothetical buyer of the company. As a result, wages paid to Susan and Greg Johnson have been added back, along with the associated payroll taxes.

We were provided with W-2 forms for Susan, representing gross wages. Payroll taxes were estimated to be 8 percent of gross wages. This is calculated as follows:

EXHIBIT 6.11 Sample Normalization Section from a Report

	2013	2014	2015	2016
Susan Payroll				
Gross from W-2's	\$12,000	\$12,000	\$ 3,840	\$ 9,555
Taxes (8%)	960	960	307	764
Total payroll	\$12,960	\$12,960	\$ 4,147	\$10,319

In addition, in 2014 there were checks payable to Susan in the amount of \$720 that were also added back. We were also provided with W-2 forms for Greg, and again, estimated payroll taxes at 8 percent of gross wages. This is calculated as follows:

	2013	2014	2015	2016
Greg Payroll				
Gross from W-2's	\$28,920	\$10,920	\$10,920	\$10,203
Taxes (8%)	2,314	874	874	816
Total payroll	\$31,234	\$11,794	\$11,794	\$11,019

It was discussed earlier that Greg received paychecks in order to receive health insurance. In addition to this, Greg received payments as a vendor for his actual services rendered. These amounts were not added back because the company would have had to pay someone else to do what Greg did.

The total adjustment is calculated as follows:

	2013	2014	2015	2016
Total Susan	\$12,960	\$13,680	\$4,147	\$10,319
Total Greg	31,234	11,794	11,794	11,019
Grand Total	\$44,194	\$25,474	\$15,941	\$21,339

14. Health insurance and company-sponsored life insurance for Mrs. Johnson, Susan, and Greg were added back. The 2014 and 2016 health insurance invoices were analyzed; the 2015 paid invoices could not be found. The actual premiums for Mrs. Johnson, Greg, and Susan for 2014 and 2016, along with the observed pattern of increases were used to estimate the 2015 amount. This is shown in the following:

(continued)

EXHIBIT 6.11 Sample Normalization Section from a Report *(continued)*

Neighborhood Health Insurance			
2014	Elizabeth + Susan	Greg	
Jan	\$ 449.37	\$ 155.80	
Feb	449.37	155.80	
Mar	449.37	155.80	
Apr	449.37	155.80	
May	449.37	155.80	
Jun	449.37	155.80	
Jul	449.37	155.80	
Aug	449.37	155.80	
Sep	449.37	155.80	
Oct	554.04	192.09	
Nov	554.04	192.09	
Dec	554.04	192.09	
2014 Totals	\$5,706.00	\$1,978.00	\$7,685.00

Neighborhood Health Insurance			
2015	Elizabeth + Susan	Greg	
Jan	\$ 554.04	\$ 192.09	
Feb	554.04	192.09	
Mar	554.04	192.09	
Apr	554.04	192.09	
May	554.04	192.09	
Jun	554.04	192.09	
Jul	554.04	192.09	
Aug	554.04	192.09	
Sep	554.04	192.09	
Oct	628.82	218.03	
Nov	628.82	218.03	
Dec	628.82	218.03	
2015 Totals	\$ 6,873.00	\$ 2,383.00	\$9,256.00

EXHIBIT 6.11 Sample Normalization Section from a Report

Neighborhood Health Insurance			
2016	Elizabeth + Susan	Greg	
Jan	\$ 628.82	\$ 218.03	
Feb	628.82	218.03	
Mar	628.82	218.03	
Apr	628.82	218.03	
May	628.82	218.03	
Jun	628.82	218.03	
Jul	628.82	218.03	
Aug	628.82	218.03	
Sep	628.82	218.03	
Oct	689.27	236.67	
Nov	580.87	209.92	
Dec	580.87	209.92	
2016 Totals	\$7,510.00	\$2,619.00	\$10,129.00

An estimate was made for 2013 using the average change in premiums from 2014–2016, which was 15 percent. The company-sponsored life insurance plan only showed premiums for Mrs. Johnson and Greg of \$9.25 per month for the years 2014 and 2015. The annual amount is \$222 and is assumed to be the same in 2013 and 2016. This amount is added to the health insurance expense to arrive at a total adjustment as follows:

	2013	2014	2015	2016
Health insurance	\$6,532	\$7,685	\$9,256	\$10,129
Life insurance	222	222	222	222
Total adjustment	\$6,754	\$7,907	\$9,478	\$10,351

(continued)

EXHIBIT 6.11 Sample Normalization Section From a Report *(continued)*

15. This adjustment shows payments made by the company on behalf of the Johnsons. These are non-operating expenses and, therefore, are added back. The amounts are as follows:

	2013	2014	2015	2016
BellSouth	\$1,993	\$2,558	\$2,198	\$2,479
T-Mobile	1,106	2,076	395	158
Voicestream	1,342	—	—	—
Direct TV	—	308	—	—
Total	\$4,441	\$4,942	\$2,593	\$2,636

16. The miscellaneous adjustments are as follows:

	2013	2014	2015	2016
Camp Havefun ^A	\$ —	\$ —	\$1,705	\$ —
Checks to Elizabeth Johnson ^B	—	3,744	—	—
Checks to John Johnson & Cash for Travel Expenses (50%) ^C	7,100	8,151	3,750	8,501
Checks to Cash in 2015 ^D	—	—	3,000	—
Totals	\$7,100	\$11,895	\$8,455	\$8,501

- A. This is a non-operating expense and, therefore, added back.
- B. Checks written to Elizabeth Johnson were considered personal in nature and have been added back.
- C. The checks written to John Johnson are largely travel-related. However, the company's records are relatively poor; therefore, we have added back 50 percent as being nonbusiness-related.
- D. In 2015, there was a \$3,000 check made out to cash that was signed by Elizabeth Johnson and charged to warehouse expense. Because no support for this check has been provided, the entire amount has been considered discretionary and has been added back.
17. Losses sustained from selling assets are considered to be nonrecurring and have been added back to better reflect the operating income of the company.
18. Historic income taxes have been added back, and corporate taxes have been recalculated based on the adjusted net income.

Conclusion

You should now have a better idea about what the valuation analyst does with the data that he or she collects. By now, you should be getting the message that the valuation analyst performs a risk assessment with the data collected. This information can then be used in the determination of market multiples, discount rates, and capitalization rates.

The data collected and analyzed is critical to the valuation process. If the valuation analyst is not comfortable with analyzing the gobs and gobs of data that he or she will be collecting, he or she may want to reread some financial statement analysis textbooks. I hope, for his or her sake, he or she is okay with this stuff. Those types of textbooks are like watching paint dry—real excitement!