CHAPTER 20
OVERVIEW OF FINANCIAL STATEMENTS

IN THIS CHAPTER
- Basic concepts
- The income statement
- The balance sheet
- Statement of owner's equity
- Cash flow statement
- Financial statement analysis

INTRODUCTION
As we learned in Chapter 17, accounting is the process of recording and analyzing financial data. Financial statements are the means of communicating this data to internal and external users:

- **Internal users** include owners and managers, who need feedback on financial decisions and a reliable way to assess opportunities and needs.
- **External users** include bankers, investors, partners, suppliers and governmental agencies, who need to evaluate investment risk, determine credit or assess taxes.

Financial statements tell the story of what happened to a business over a specified period (usually a year). Comparative statements also include information from previous years. In other cases, financial statements are prepared as a forecasting tool. These are called **pro forma statements** and result from the budgeting process.

BASIC CONCEPTS
In addition to the basic principles we discussed in the previous chapters, you need to understand a few more accounting concepts to prepare and interpret financial statements.

- **Historical cost principle.** All amounts must be recorded at the price of the transaction at the time it occurred. Suppose a business bought land 20 years ago at a price of $50,000. Today, that land may be worth $250,000. However, the historical cost of $50,000 is used in the financial statements, because market-value estimates are subjective and change often.
- **Economic entity concept.** A business's accounting records are separate from those of all other entities, including owners. Let's say a sole proprietor buys a computer for personal use. Even if business funds are used for the purchase, the computer does not belong in the business's financial statements. If the computer had been purchased for business use, the expense would be included on the financial statement.
- **Full disclosure principle.** This principle mandates full disclosure of events and circumstances that affect the user of the financial statements. This can be done in the statements themselves or in attached footnotes. As a result of recent lawsuits, the amount of disclosure required has been increasing.

Financial statements tell the story of what happened to a business over a specified period.

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I'd been thinking about working from home for a long time, so when Anne left for college, I decided it was time to get busy. At first, I really enjoyed working from home.

But wasn't too long before I started feeling restless again. Working in the travel industry had gotten harder than it was when I started out, and I'm sure that was part of it. The bigger problem was that I was just bored.

Louisa Egan spent 15 years running a busy travel agency in Peekskill, New York. She specialized in customized adventure travel packages. While her daughter Anne was pursuing an MBA at SUNY-New Paltz, Louisa decided to close her office and manage a small pool of her favorite clients from home.

But within a few months, Louisa realized she'd had enough of the travel business. She wanted to start a new business that would create a tangible product—one she could pass on to Anne when she retired.

Louisa and Anne had been making jams together every summer for the past 19 years, using raspberries, blueberries, strawberries and peaches from local farms. Louisa gave it to friends, clients and employees, and everyone raved about it.

I probably wouldn't have thought that much about the idea, but when Anne came home on break she seemed really excited about it. I barely saw her, because she was so busy researching the market for specialty jams or visiting organic farmers. The next thing I knew, she was waving a feasibility study at me. The numbers looked good, so we decided to go for it.

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THE INCOME STATEMENT

The income statement is also called a **profit and loss statement** or **operating statement**. It measures business performance over a specified time, based on this simple formula:

Revenues - Expenses = Net income

This information helps you calculate your net profit:

1. Sales Revenue - Variable Expenses = Gross Profit
2. Gross Profit - Operating Expenses = Profit Before Taxes
3. Profit Before Taxes - Taxes = Net Profit

ITEM 1—Sales. This shows the total dollars earned from your primary operations, regardless of when you receive the payment. A separate category, Other gains and losses, includes earning activities other than your primary operations.

ITEM 2—Cost of Goods Sold. This is the major expense for retailers, wholesalers and manufacturers. In some cases, it may be tricky to calculate. For example, suppose you buy an inventory item for $5.70 each in April and $5.90 each in May. When you make a sale, how would you calculate cost of goods sold? If you can identify the specific products sold, you can answer the question easily. If not, you must use one of three assumptions: the first in are the first out (FIFO); the last in are the first out (LIFO); or an average of the two prices ($5.70 + $5.90 = $11.60; $11.60 divided by 2 = $5.80).

As we noted earlier, manufacturers must consider three factors in their cost of goods sold:

- **Direct materials** are an integral part of the product. For a furniture manufacturer, this would include wood and hardware.
- **Direct labor** is used to manufacture the product. For a furniture manufacturer, it would be the cost of the workers who build the furniture.

Your Business, LLC
Income Statement
For the Year Ended December 31, 2018

①	Sales		$ 450,000
②	Less: Cost of Goods Sold		(200,000)
③	Gross Profit		**$ 250,000**
④	Less: Operating Expenses		
	Wages	$ 80,000	
	Payroll tax	20,000	
	Insurance	5,000	
	Rent	24,000	
	Utilities	1,400	
⑤	Depreciation	1,300	134,700
	Net Operating Profit or Loss		**$115,300**
	Other gains and losses		
	Interest revenue		700
	Interest expense		(1,200)
	Net Income Before Taxes		**$114,800**
⑥	Less: Income Taxes		(30,000)
⑦	Net Income		**$84,800**

- **Overhead** comprises all manufacturing costs not already included in direct materials or direct labor (e.g., workspace rental and electric bills).

ITEM 3—Gross Profit. This is the amount left over after covering cost of goods sold. When you subtract expenses from gross profit, the result is your net income or loss.

ITEM 4—Operating Expenses (or Fixed Costs) are expenses you must pay even if you make no sales, such as rent, utilities, wages and loan payments. For most small businesses, operating expenses include all expenses except cost of goods sold, interest and income tax.

ITEM 5—Depreciation. In common usage, depreciation is the decrease in value of an asset over time. Accountants use depreciation to spread the cost of equipment, buildings and tools over the life of those assets. The cost of these items is a business expense, just like wages or rent. But these assets have a longer useful life, so they should not be shown as a one-time expense. As an example, suppose your business buys a piece of equipment for $25,000, and you expect to use it for 25 years. Accordingly, we would record the expense over the item's 25-year useful life.

Most small businesses use one of two depreciation methods:

- The **straight-line method** divides the cost of the asset by its estimated useful life, as defined by IRS depreciation tables. In the example above, depreciation expense is $25,000 divided by 25 years, or $1,000 per year.

- The **declining balance method** applies the depreciation rate to the non-depreciated balance of the asset's value, resulting in higher depreciation rates in the early years of the asset's life. Again using the example above, if your $25,000 asset were depreciated by 20 percent, your first-year depreciation expense would be $5,000. In the second year, the same depreciation expense rate would be applied to the balance of $20,000, resulting in a depreciation expense of $4,000, and so on.

Note that if you use an asset for business and personal purposes, you can only deduct depreciation on the percentage of the asset used for business.

ITEM 6—Income Taxes. These taxes are not considered a business expense for sole proprietorships, partnerships or LLCs, because they are paid by the owners rather than by the business. Income taxes are levied on corporations, so they do appear on the corporation's income statement.

ITEM 7—Net Income. We have worked our way to the bottom line. Again, for the income statement, that means:

Revenues - Expenses = Net income

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Within a month, Anne and Louisa had negotiated a long-term lease of an old bottling and commercial kitchen facility near the Artist's District. A warehouse was attached to the back of the building. The building needed a lot of work, so they negotiated with the owner to get the first four months free in exchange for repairs.

Anne was assuming we could produce 10,000 jars of jam during our months of production. That seemed impossibly huge. But again, she showed me a spreadsheet and it made sense.

The busiest time would be the summer, when the local farmers are harvesting berries. We'd work on production in the summer and fall. The rest of the year, we'd just need the warehouse and office space. I liked the seasonal aspect of the business. I was bored with being a travel agent, but that doesn't mean I was bored with travel!

Anne thought they could rent out their excess kitchen capacity during the down months. Revenue from these subleases would cover the maintenance and overhead costs for the large facility. In fact, depending on how well she managed the facility, the subleases could end up providing them with some serious income.

She asked around and came up with three local businesses that were interested. Eventually, she decided to sublease to a small catering company called Peek's Creek Catering.

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THE BALANCE SHEET

The balance sheet shows the business's financial situation on a given day. The formula for the balance sheet is:

Liabilities + Owner's Equity = Assets

As we learned earlier, assets are economic resources owned by the business, purchased with funds supplied by creditors or owners. Liabilities are amounts owed by the business to creditors. Owner's equity refers to amounts owed by the business to the owners.

The balance sheet shows the total of what the business owns and divides up the assets, as shown in the sample on this page.

Often, owner's equity is described as the amount left over after liabilities are subtracted from assets. Though accurate, this is perhaps not the most helpful way to think about equity. Recall the discussion of the economic entity concept: If the business is a separate economic entity from

Your Business, LLC
Balance Sheet
As of December 31, 2018

ASSETS			
① **Current Assets**			
	Cash	$ 35,000	
	Accounts Receivable	70,000	
	Inventory	120,000	
	Other	12,000	$ 237,000
② **Property, Plant and Equipment**			
	Land	$ 80,000	
	Buildings	250,000	
	Equipment	175,000	
③	Less: Accumulated Depreciation	(105,000)	400,000
④ **Intangible Assets**			
	Trademark	$ 10,000	
⑤	Goodwill	60,000	70,000
		TOTAL ASSETS	**$707,000**
LIABILITIES			
⑥ **Current Liabilities**			
	Accounts Payable	$ 4,500	
	Wages Payable	3,200	
	Payroll Taxes Due	600	$ 8,300
⑦ **Long-Term Liabilities**			
	Notes Payable		$ 24,500
		TOTAL LIABILITIES	**$32,800**
OWNER'S EQUITY			$ 37,900
⑧		**TOTAL LIABILITIES AND EQUITY**	**$ 70,700**

the owners, then the owners are just like all other creditors. Funds loaned to the business by creditors must be repaid someday, and creditors usually expect to earn interest on their loans.

In the same way, owners hope to get back the amount they put into the business, plus some profit. Thus, equity represents the amount the business owes to the owners for their investment, plus profit.

ITEM 1—Current Assets are resources the business owns and expects to convert to cash or use within one year of the balance sheet date. This relates to the business's short-term ability to meet financial needs. In our example, your business owns assets that it expects to convert to $237,000 cash in the next year: In addition to $35,000 of existing cash, accounts receivable will be collected, inventory will be sold, and other assets will be converted into cash for a total of $237,000.

ITEM 2— Fixed Assets (such as property, plant and equipment) have a useful life of more than one year. A fixed asset is considered an investment in the business—rather than an expense—at the time you buy it. Therefore, the amount you pay for the asset appears on the balance sheet instead of the income statement. Remember, though, that these assets are listed at historical cost. In our example, $250,000 is the cost of the buildings when they were acquired, as opposed to their current market value.

ITEM 3—Depreciation. Each year, you can deduct a percentage of the asset's original price as a depreciation expense on your income statement. This lets you accumulate tax-exempt cash to replace worn-out assets, and it also gives you an additional incentive to keep investing in your business. In our example, accumulated depreciation is $105,000. Out of the total cost of buildings and equipment of $425,000, there remains $320,000 of depreciation expense. (Note: Land is not depreciated, because its useful life is unlimited.)

ITEM 4—Intangible Assets include patents, copyrights, trademarks and goodwill. Intangible asset costs are expensed in a manner similar to depreciation, called **amortization**. The amount on the balance sheet is the historical cost less accumulated amortization. This may not be a very big number, but it can represent something very valuable to the company.

For example, how important is the "swoosh" logo to Nike or the Golden Arches to McDonald's? Very important! And yet these intangible assets may not be large amounts in the financial statements, where they are recorded at historical cost. The only cost to Nike of the "swoosh" was a fee to the firm that designed it.

This can create problems for small businesses trying to obtain financing. What if the most valuable asset the business owns is a patent? The patent appears on the balance sheet as the cost of obtaining it (e.g., attorney and filing fees). This means that your most valuable business asset may appear on your balance sheet at a fraction of its worth.

ITEM 5—Goodwill. This is another intangible asset. Suppose you buy a company with a reputation for great customer service. Chances are, you'll pay more because of that reputation. The excess payment represents an estimated dollar value for goodwill.

ITEM 6—Current Liabilities are debts you must pay within the next year.

ITEM 7—Long-Term Liabilities are debts due more than one year from the balance sheet date. They often include notes payable to the bank and investors.

ITEM 8—Owner's Equity. For a sole proprietorship, the owner's share of the business is listed as a single amount, usually called capital. A partnership follows the same format, except that it lists a capital amount for each partner.

The owner's equity for a corporation is divided. The amount invested by the stockholders is **capital stock**. Profits owed to the owners are **retained earnings**.

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After we'd been up and running for maybe a year, it became obvious that we'd underestimated the amount of money we needed in order to keep our business going. The main issue was that the cost of upgrading and maintaining the facility was a lot higher than we anticipated.

Also, the space had come with a lot of equipment, but a lot of it was too outdated to use. Even the relatively modern stuff tended to break down a lot.

Once you've paid a couple of $500 repair bills for old machines, or spent a couple of days scouring the Internet for discontinued parts, you start dreaming about getting some shiny new equipment. We both liked the old-fashioned feel of the space at first, but after dealing with all these headaches, we were over it.

Anne sat down and calculated that if they invested in modern, efficient equipment, it would save on the cost of running and maintaining the old equipment, and it would also give them a larger and more reliable production capacity.

The cost of the new equipment was over $50,000, which meant that it was time for Louisa's Jams to look for external financing.

But first, they needed to clean up their financial statements, fine-tune their business plan, and create a realistic financing proposal.

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STATEMENT OF OWNER'S EQUITY

The **statement of owner's equity** is a bridge between the income statement and the balance sheet. The income statement shows net income (i.e., income for the owner's benefit). The statement of owner's equity adds net income to the amount already owed to the owners. The adjusted owner's equity amount is then listed on the balance sheet.

The format differs depending on ownership. For sole proprietorships, it looks like this:

Your Sole Proprietorship
Statement of Owner's Equity
For the Year Ended December 31, 2018

Beginning capital	$70,000
New investment by owner	10,000
Net income	50,000
Withdrawals	(40,000)
Ending capital	**$90,000**

Partnerships use the same format, but with a capital account listed separately for each partner. A corporation uses this format:

Your Company, Inc.
Statement of Retained Earnings
For the Year Ended December 31, 2018

Beginning retained earnings	$100,000
Net income	250,000
Less: dividends	(150,000)
Ending retained earnings	**$200,000**

CASH FLOW STATEMENT

When businesses use the accrual method of accounting, they gain very useful information about their past, present and future finances. However, it's often helpful to have a simpler explanation of how your business earned and spent its cash.

That's the purpose of the **cash flow statement**. It details the amounts, sources and uses of cash inflows and outflows. No new data are required to create this statement; the information comes from the other financial statements.

Preparing a cash flow statement is often difficult, because amounts recorded using the accrual method must be converted to their equivalent under the cash method. For this reason, most small businesses have an accountant prepare this statement.

ITEM 1—Cash Flows from Operations. The statement of cash flows is divided into three categories, the first of which shows inflows and outflows from operations.

Your Business, LLC
Statement of Cash Flows
For the Year Ended December 31, 2018

① **Cash flows from operations**	
Net income	$90,000
Depreciation expense	50,000
Increase in accounts receivable	(80,000)
Increase in inventory	(40,000)
Decrease in accounts payable	(10,000)
Cash provided by operations	$ 10,000
② **Cash flows from investing activities**	
Purchase of new equipment	$ (55,000)
Sale of old equipment	40,000
Cash used for investing activities	$(15,000)
③ **Cash flows from financing activities**	
Proceeds from new borrowings	$ 135,000
Principal payments on borrowings	(85,000)
Payment of dividends	(30,000)
Cash provided by financing activities	$ 20,000
④ Net increase in cash	$ 15,000
Cash balance 12/31/17	20,000
Cash balance 12/31/18	**$ 35,000**

There is a direct way and an indirect way to present this information; we have shown the indirect method above. Your accountant may choose to use the direct method, but the result is the same: It shows what net income would have been using the cash method.

The indirect method can be very helpful in understanding the difference between net income and cash flow. Let's review the example above. The business had $90,000 of net income. (This number is taken directly from the bottom of the income statement.) We must adjust this amount so that it reflects the amount of cash held by the business today.

First, net income includes depreciation expense, which is a process of cost allocation and has nothing to do with cash. (The cash was spent years ago, when the business bought the equipment.) Since depreciation does not cause additional cash to be spent, we can add it back to net income.

Next, we'll look at three crucial operating accounts:

- **Accounts receivable** have increased over last year's level, meaning that many of our sales have not yet turned into cash.
- **Inventory** is higher than it was the previous year, so we must have used some of our cash to build up our inventory.

- **Accounts payable** have decreased, so we must have used cash to pay off more debts than normal.

So far, the statement of cash flows shows that we have lots of net income. But we don't have much cash on hand, thanks to slow collections, increased inventory and fewer outstanding bills.

ITEM 2—Cash Flows from Investing. For small businesses, these inflows and outflows relate primarily to buying and selling property and equipment.

ITEM 3—Cash Flows from Financing. This section lists cash flows from borrowing, paying off debts, issuing stock and paying dividends.

ITEM 4—Net Increase in Cash. The statement concludes with the net change to cash during the year, which should equal the difference between the cash balance at the beginning and end of the period.

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Back when I had my agency, my accountant handled most of the numbers. I knew what financial statements were, more or less, but I couldn't have created them myself and I didn't know how versatile they were. For me, at that time, they were like an annual checkup.

Working with Anne was quite an education, and I had a lot more appreciation for how statements and budgets can help you make everyday decisions. I'd been missing out!

As they prepared to seek financing for their new equipment, Anne and Louisa had a lot of questions:

- *Which jams are most profitable? Which sell most, and which sell least?*
- *How much debt can the business afford to carry? How would the new debt affect cash flow? How would it affect key financial ratios?*
- *What portion of their earnings come from renting out their excess kitchen capacity? Should they charge a higher rent to improve their cash flow?*
- *Does the sales forecast demonstrate a growth market? Is it a good time to grow?*

Updating the business's financial statements answered these questions, and it also gave Louisa confidence in her business and her product. It was easy to see the strengths of the business. And although there were also weaknesses, most of them related to the very issues Anne and Louisa were attempting to address: the unreliability and inefficiency of their outdated equipment, and the cost of maintaining their commercial kitchen space during the down months.

That was the number-one thing analyzing our financial statements did for me. At the start, I was just thinking about the cost of taking action. Was it worth it? Could we afford it? As we got deeper into the numbers, I started to understand that the cost of not taking action was a lot more relevant to our situation. When we looked at it that way, the question was not whether we could afford to do it, but whether we could afford to stay where we were.

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FINANCIAL STATEMENT ANALYSIS

Apart from indicating the health of your business and its progress toward your goals, you can use financial statements to:

- **Forecast trends.** Financial statements are historical data that can be used to identify and predict trends for revenues, profits, debt and so forth.
- **Make comparisons.** To put your business in the proper perspective, you need to compare your information with that of other businesses, with your industry as a whole, and with your own past performance and expectations.

Don't fall into the trap of concentrating on effects. Keep digging until you find causes!

- **Answer questions.** If net income is low this year, why is it low? If the answer is, "Because sales have dropped," why have they dropped? Don't fall into the trap of concentrating on effects. Keep digging until you find causes!
- **Identify threats.** If your proportion of debt to equity is outside safe limits or your accounts receivable are being collected too slowly, you know you need to take corrective action to keep your business healthy.

There are three primary factors in financial statement analysis:

- **Liquidity** is a measure of your company's ability to pay short-term bills, debts and expenses. Low liquidity may be a temporary issue (as in the case of Louisa and Anne's seasonal jam business) or it may indicate a more fundamental problem with profitability.
- **Leverage** is the amount of debt used to finance a business, compared to its amount of equity. Higher leverage means more debt, less equity—and in many cases—higher risk.
- **Profitability** is a measure of the financial return a business earns on its assets and other resources. It depends on many factors, including price, sales level, expenses and debt.

These factors can't be considered in isolation. The goal of financial analysis is to look at their relationship with one another, and with industry and financial standards. We'll discuss this in more detail shortly.

It isn't easy to get financial information about other small businesses. Some trade associations publish averages and make them available to members. There are also general sources, which you can find in your public library or obtain from your banker or CPA. Well-known publications include:

- *Annual Statement Studies*, published by Robert Morris Associates
- *Key Business Ratios*, published by Dun & Bradstreet
- *Almanac of Business and Industrial Financial Ratios*, published by Prentice-Hall

If you decide to compare your business with published industry data, keep in mind that these are averages from which there can be wide deviation.

Now, let's look at three basic types of financial statement analysis: vertical analysis, horizontal analysis and ratio analysis.

Vertical Analysis

In this method, each item in the financial statement is expressed as a percentage of a selected base amount. Net sales are used as the base amount on the income statement, and total assets are used on the balance sheet. Consider this example:

Your Business 2018 Income Statement		
Net Sales	$350,000	100%
Cost of Goods Sold	($130,000)	52%
Gross Profit	120,000	48%
Operating Expenses	100,000	40%
Net Income	**$20,000**	**8%**

Your Business Balance Sheet - 12/31/18		
Assets		
Current Assets	$400,000	100%
Property, Plant & Equipment	260,000	65%
Intangible Assets	40,000	10%
Liabilities	$260,000	65%

Current Liabilities	80,000	20%
Long-term Liabilities	$180,000	45%
Owner's Equity	$140,000	35%
Total Liabilities and Equity	$400,000	100%

The percentages show the relative size of each component. You can then view these percentages in relation to previous years. If operating expenses for our sample business are typically 31 percent of net sales, then some investigation of expenses is warranted. If current assets are usually 35 percent of total assets, what has changed?

Vertical analysis is also helpful when comparing your business to a business of a different size or to industry averages. Instead of comparing the numbers, compare the relationship of the numbers. Is your gross profit of 48 percent average for your industry? How do long-term liabilities comprising 45 percent of total assets compare to your competitors?

Horizontal Analysis

Horizontal analysis uses percentages over time, rather than down the financial statement. Choose a base year, and express amounts for all other years as percentages of the base amount. Suppose we choose 2016 as the base year. Consider the following sales figures:

Year	2019	2018	2017	2016
Sales	$186,000 155%	$180,000 150%	$126,000 105%	$120,000 100%

As you can see, sales increase by five percentage points per year, except in 2018. Investigating the reason for this large jump might give you information that will help you plan current marketing strategies, or you could follow the historical trend and budget 2020 sales at 160 percent of the base, or $192,000.

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Anne decided to do a cost/volume analysis to answer her mother's questions about how the business was generating its profits, and how close she was to recouping her initial investment.

Louisa's fixed and variable costs included the following items:

Fixed costs	**Variable costs**
Lease payments	*Hourly wages*
Salaries	*Jars, labels, lids*
Maintenance / depreciation	*Berries*
Insurance	*Sugar*
	Pectin

Anne calculated that for every $4 jar of jam they sold, variable costs were $0.55 and fixed costs were $1.45. This meant that each jar generated $2 of profit. If the business continued at its current sales levels, it would repay its initial investment by the end of the year. Louisa was very happy to hear this.

Anne had figured out that our debt/equity ratio was only about 25 percent. That sounded like a lot of debt to me at first, but she said that plenty of businesses would feel that this was too little debt. They'd probably want to borrow a little more to generate a better return.

She felt the business could easily afford to carry more debt, especially since the new equipment would help us meet demand and maybe even make it grow.

To be totally honest, we had already decided to get the new equipment. But doing the math made us feel safer about that decision. And speaking just for myself, it made me feel a lot better about my readiness to negotiate a loan. I felt like we were on very solid ground.

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Ratio Analysis

A **ratio** is the comparison of one amount to another. Standard financial ratios can be grouped into four categories: liquidity ratios, capital structure (or leverage) ratios, asset management ratios and profitability ratios. Earlier, we mentioned that liquidity, leverage and profitability need to be considered in relation to each other. Ratio analysis is the most common way to accomplish this.

Ratio analysis is critical for managing a successful business.

Ratio analysis is critical for managing a successful business. Each of these ratios provides you with a window into the inner workings of your company; learn to use them to your advantage. There is a more detailed discussion of ratios in Chapter 26 *Financial Management*.

Liquidity ratios

Liquidity ratios measure a business's ability to pay its current and short-term debts and expenses. Bankers analyze these ratios before approving short-term business loans.

Working capital is the money your business needs to pay its bills until inventory is sold and receivables are collected. It can be calculated like this:

$$\text{Current Assets} - \text{Current Liabilities}$$

Current ratio

$$\frac{\text{Current Assets}}{\text{Current Liabilities}}$$

The current ratio provides another way to look at working capital. Because it is expressed as a ratio, it represents the *relationship* of current assets to current liabilities, rather than an absolute amount. (After all, working capital of $40,000 may be plenty for one business and very low for another.)

Because needs differ from business to business, there are no established minimums or maximums for the current ratio. However, there may be a rule of thumb for your industry. For each business, there is a level at which the ratio is too low and there is a serious risk that current debts cannot be paid. If the ratio is very high, it may mean the business is keeping too much excess cash or storing too much inventory.

Quick ratio

$$\frac{\text{Current Assets} - \text{Inventory}}{\text{Current Liabilities}}$$

The quick ratio is a further refinement of the current ratio. It removes inventory from the calculation because inventory is the least liquid of the current assets.

Asset management ratios

These ratios measure how efficiently a business manages its assets to generate sales.

Inventory turnover ratio

$$\frac{\text{Cost of Goods Sold}}{\text{Average Inventory}}$$

The inventory turnover ratio shows the average number of times inventory is sold during the year. A grocery store would have a much higher ratio than a manufacturer of handcrafted canoes, because people buy groceries more often than they buy canoes. Many small businesses get into trouble when their inventory sits and sits; a decreasing inventory turnover ratio will alert you to this problem. If inventory is turning over rapidly, it may mean that customer demand is barely being met and it's time to expand the business.

Receivables turnover ratio

$$\frac{\text{Net Credit Sales}}{\text{Average Net Receivables}}$$

Your credit policies affect your receivables turnover ratio. Granting credit to slow-paying customers makes the ratio decline. This might explain why your business is always short of cash. A high ratio may mean your credit terms are too rigid.

Capital structure ratios

If you consult published industry sources, you'll find several ratios that measure capital structure. Here are the most common:

Debt to assets ratio

$$\frac{\text{Total Debts}}{\text{Total Assets}}$$

Debt to equity ratio

$$\frac{\text{Total Debts}}{\text{Total Equity}}$$

These ratios measure the percentage of assets funded by borrowing against the percentage funded by the owners. If your business's debt to assets ratio is 65 percent, it follows that 35 percent of the total assets were purchased with your money.

These ratios determine the relative riskiness of your capital structure. Carrying large amounts of debt increases the risk of insolvency (inability to meet long-term financial obligations) and necessitates current payments for interest and principal. Too little debt may mean that the business is missing out on worthwhile opportunities.

Profitability ratios

These ratios relate earnings to available resources. You might think of them as answering the question, "How well did I do, given what I had to work with?"

Gross profit margin ratio

$$\frac{\text{Gross Profit}}{\text{Net Sales}}$$

Earlier, we defined gross profit as net sales minus cost of goods sold. Here, we express gross profit as a percentage of net sales. This percentage is very important for making marketing decisions, determining cash needs and assessing profitability.

High-volume discount stores like Walmart keep their gross profit percentages down and try to make up the revenue by increasing their sales volume. This strategy seldom works for small businesses, so it's important to keep an eye on this ratio. If your gross profit percentage declines, it may mean that sale prices are dropping or the cost of goods is increasing.

Net profit margin ratio

This ratio calculates how efficiently your business converts revenues into profits.

$$\frac{\text{Net Income}}{\text{Net Sales}}$$

Return on assets ratio

$$\frac{\text{Net Income}}{\text{Total Assets}}$$

This ratio measures how much profit your company is earning on its assets. It's most often used to compare the performance of a business to other businesses in the industry.

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When Anne and Louisa updated their statement of cash flows for the past year, they found that:

- *25 percent of the business's revenues came from leasing its excess capacity.*
- *In any given month, the business had an average cash balance of $28,000. This was more than it needed on hand.*
- *The business earned 75 percent of its operating revenues in September and October.*

They concluded that they should buy the new equipment in November, when the business had its largest cash reserves. They also lowered their target borrowing amount, because they felt they could *afford to reinvest a larger portion of profits in the business. In essence, they had underestimated the business's ability to pay for its own expansion.*

We were surprised by how much we were earning from the kitchen sublease. Even so, there was plenty of room for growth there, as well as for a similar leasing arrangement with the warehouse space. Jam doesn't take up that much room, so we almost never used more than a third of the available space.

We realized that some of the new equipment—like the destoner and the vacuum pans—could be rented out as well. Most of the year, we barely used them. And although we'd totally overlooked it, we were also able to sell a lot of our old equipment and fixtures. It only pulled in about $1,000, but that was still a nice windfall.

Last, I suggested that we offer our tenants financial planning and budgeting assistance from Anne. Although it was kind of an afterthought, it ended up being a good selling point. People knew us by then, and they felt like we knew what we were doing.

Anne and Louisa presented a financing proposal to four local banks. It stated that the company wanted to borrow $30,000 to pay for new processing equipment, and that based on its projected sales (growing at 20 percent a year), it could repay the principal with interest in five years. A month later, they received their loan.

I feel like the time we put into crunching the numbers paid off very well for us. A skeptic might say, "Well, you were the same business before and after you did all that work. You still would've got the loan."

But actually, we might not even have pursued the loan, or we might've put it off indefinitely. Sure, things might have worked out anyway. But I slept a lot better knowing that we'd done our homework. There's plenty of uncertainty in business. Why would I want more?

In some ways, it's a lot like travel. Good planning isn't just about getting where you want to go; it's also about preparing yourself to make the most of opportunities along the way.

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Limitations of Financial Statement Analysis

Although financial statements are the accepted means of communicating financial information about a business, there are limits to their usefulness.

- **Historical cost principle.** Accountants chose this method to make accounting information more reliable, but it also can make the information irrelevant. Who cares how much something cost 50 years ago? Isn't it better to know how much it's worth today? You won't find that amount in the financial statements.
- **Off-statement transactions.** Many transactions are not reflected in financial reporting. This can result from the complexity of the transaction, barter transactions that are not recorded in the books, or the correct application of accounting principles that allow certain transactions to be "off-statement."
- **Different accounting methods.** If you measure your results against those of other businesses, different accounting methods may result in an apples-to-oranges comparison. This is especially true of businesses operating in foreign markets, which may use different accounting standards. Also, if you've changed how you calculate or categorize expenses or other data over time, comparing past performance to current performance may be misleading.
- **Relevance.** The information you get from comparing your business to one many times its size may not be relevant due to the larger business's economies of scale.

NxLeveL® TECH TIP

BUSINESS RESOURCES AND THE WEB

Extensible Business Reporting Language (XBRL)

Extensible Business Reporting Language (XBRL) is a markup language that streamlines the reporting of electronic business data, including financial statements. It works by tagging each piece of financial data with a standard machine-readable definition, so that computer programs know how to interpret, process and display it. This means that even if two companies use different terms for the same concepts—or two different accounting systems, such as Generally Accepted Accounting Principles (GAAP) vs. International Financial Reporting Standards (IFRS)—XBRL will recognize them. This makes financial data much easier to easy to search, aggregate and compare. More significantly, it makes it possible for computer programs to find and use financial data without human input.

The U.S. Securities and Exchange Commission already requires larger public companies to report their financial data in XBRL, as do many foreign regulators. This requirement is likely to spread to other businesses as XBRL becomes more widely understood and used.

To learn more, visit *xbrl.us*.

- **Nonmonetary assets.** Financial statement analysis can't directly measure such important factors in business success as management quality, staff skills and brand image.
- **Garbage in, garbage out.** Financial statements are compiled from the company's daily records. If the recordkeeping is shoddy, the financial statements will be too.

CONCLUSION

Gathering and analyzing financial information is vital to running a healthy business. Successful entrepreneurs depend on this information to make decisions; financial statements deliver pertinent information on your business to internal and external parties.

In Chapter 26 *Financial Management*, we will discuss the financial analysis process in greater detail.