



CHAPTER 9

Analyzing Results Using the Income Statement

OVERVIEW

This chapter explains what you will do to analyze the cost effectiveness of your operation. It teaches you how to read and use the income statement, the financial document that is also known as the profit and loss (P&L) statement. It explains techniques used to analyze your sales volume as well as your food, beverage, labor, and other expenses. Finally, the chapter shows you how to review the income (P&L) statement to analyze your operation's profitability.

Chapter Outline

- Introduction to Financial Analysis
- Uniform System of Accounts
- Income Statement (USAR Format)
- Analysis of Sales/Volume
- Analysis of Food Expense
- Analysis of Beverage Expense
- Analysis of Labor Expense
- Analysis of Other Expenses
- Analysis of Profits
- Technology Tools
- Apply What You Have Learned
- Key Terms and Concepts
- Test Your Skills

LEARNING OUTCOMES

At the conclusion of this chapter, you will be able to:

- Prepare an income (P&L) statement.
- Analyze sales and expenses using the income statement.
- Evaluate a facility's profitability using the income statement.

INTRODUCTION TO FINANCIAL ANALYSIS

Far too many foodservice managers find that they collect information, fill out forms, and enter and receive numbers from their point-of-sale (POS) system, calculators, or computers with little regard for what they should do with all of the data they have collected.

Some have said that managers often make poor decisions because they lack information, but when it comes to the financial analysis of a hospitality operation, the opposite is usually true. Foodservice managers, more often than not, find themselves awash in numbers! It is an important part of your job to sift through this information and select for analysis those numbers that can shed light on exactly what is happening in your operation. Among other things, you will want to know:

How much money did we take in?

How much money did we spend?

How much profit did we make?

This information is necessary to effectively operate your business. It also may be required by groups that are directly or indirectly involved with the financial operation of your facility. For example, local, state, and federal financial records relating to taxes and employee wages must be submitted to the appropriate governmental authorities on a regular basis. In addition, records showing the financial health of an operation may need to be submitted to new suppliers to establish an operation's credit worthiness.

If a foodservice operation has both operating partners and investors, those partners and investors will certainly require accurate and timely updates that focus on the financial health of the business. Owners, stockholders, and investment bankers may all have an interest in the day-to-day effectiveness of an operation's management. For each of these groups, and of course, for the foodservice organization's own managers, a systematic and accurate examination of operational efficiency on a regular basis is critical.

As a professional foodservice manager, you will be very interested in examining your operation's cost of doing business. Documenting and analyzing sales, expenses, and profits is sometimes called **cost accounting**, but a more appropriate term for the process is **managerial accounting**, a term that reflects the importance managers place on this process. In this text, we use the term *managerial accounting* when referring to documenting, analyzing, and managing information related to an operation's sales, expenses, and profits.

It is important for you to be aware of the difference between **bookkeeping**, the process of simply recording and summarizing financial data, and managerial accounting, the actual analysis of that data. As an example, a POS system can be programmed to provide data about food and beverage sales per server. Management can, if it wishes, track by shift, the relative sales effort of each service employee. If this is done with the goal of examining the data to increase training needed by less productive servers or to reward the most productive ones, the POS system has, in fact, added information that is valuable and has assisted in the unit's operation.

If, on the other hand, information describing server effectiveness is dutifully recorded on a daily basis, filed away or sent to a regional office, and is then left to collect dust, the POS system has actually harmed the operation by taking management's time away from the more important task of running the business. It has converted the manager's role from that of skilled cost analyst to one of a bookkeeper (record keeper) only. This type of situation must be avoided at all times because you need to maximize your effectiveness by being in the production area or dining room during high-service periods rather than in the office catching up on your paperwork.

Bookkeeping is essentially the summarizing and recording of data. Managerial accounting involves the summarizing, recording, and, most important, analysis and use of that data. As a professional foodservice manager, you are also a managerial accountant!

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You do not have to be a **certified management accountant (CMA)** or a **certified public accountant (CPA)** to analyze data related to foodservice revenue and expense. This is not meant to discount the value of an accounting professional that can assist a manager. It is important to establish, however, that it is the professional foodservice manager, not an outside expert, who is most qualified to assess the effectiveness of the foodservice team in controlling costs while providing the service levels desired by management. The analysis of operating data, a traditional role of the accountant, must also be part of your role as a manager. The process is not complex and, in fact, is one of the most fun and creative aspects of a foodservice manager's job.

It is important to recognize that a good foodservice manager is, in fact, a manager first and not an accountant. It is also important, however, for you to be able to read and understand financial information and be able to speak intelligently and confidently with the many parties outside your operation who will read and use the information produced by accountants. This information will be crucial to your operation's overall health and success. It can also provide data that will assist you in improving the quality of your management decisions.

It is also important to know that, by federal law, it is an operation's management (not its accountants) that is called on to verify the accuracy of the financial data it reports. In the past, some managers in some industries have fraudulently reported their financial information. As a direct result, the United States Congress, in 2002, passed the **Sarbanes–Oxley Act (SOX)**. Technically known as the Public Company Accounting Reform and Investor Protection Act, the law provides criminal penalties for those found to have committed accounting fraud. Sarbanes–Oxley (SOX) covers a whole range of corporate governance issues, including the regulation of those who are assigned the task of verifying a company's financial health. Ultimately, Congress determined that a company's implementation of proper financial reporting techniques is not merely good business, it is the law, and violators are subject to fines or even prison terms!

FUN ON THE WEB!

The 2002 Sarbanes–Oxley Act became law to help rebuild public confidence in the way corporate America governs its business activities. The Act has far-reaching implications for the tourism, hospitality, and leisure industry. To examine an overview of its provisions, go to <http://www.sec.gov/about/laws.shtml>.

When you arrive at the site, select “Sarbanes-Oxley Act of 2002.”

UNIFORM SYSTEM OF ACCOUNTS

Financial reports related to the operation of a foodservice facility are of interest to management, stockholders, owners, creditors, governmental agencies, and, often, the general public. To ensure that this financial information is presented in a way that is both useful and consistent, a **uniform system of accounts** has been established for many areas of the hospitality industry. In Chapter 1 you learned that the National Restaurant Association, for example, has developed the *Uniform System of Accounts for Restaurants (USAR)*.

Uniform systems of accounts also exist for hotels, clubs, nursing homes, schools, and hospitals. Each system seeks to provide a consistent and clear manner in which managers working in those areas can record sales, expenses, and the overall financial condition of their specific organizations. Sales categories, expense classifications, and methods of computing relevant ratios are included in the uniform systems of accounts. These uniform systems are often made available by the national trade or professional associations involved with each hospitality segment.

It is important to note that the uniform systems of accounts are guidelines, not a mandated methodology. Small foodservice operations, for example, may use the

USAR in a slightly different way than will large operations. In all cases, however, operators who use the uniform system of accounts “speak the same language,” and it is truly useful that they do so. If operators prepared financial records in any manner they wished, it is unlikely that the many external audiences who must use them could properly interpret the reports. As a result, it is important that managers secure a copy of the applicable uniform system of accounts for their operations and then become familiar with its basic formats and reporting principles.

FUN ON THE WEB!

Look at the following site to review *The Uniform System of Accounts for the Lodging Industry*. Go to the Educational Institute of the American Hotel and Lodging Association website. When you arrive search for “Uniform System of Accounts for the Lodging Industry 10th Revised Edition” to see a synopsis of the book and, if you wish, to place an order.

FUN ON THE WEB!

Hospitality managers can learn what they need to know about reporting and analyzing their financial results in books devoted specifically to that subject. One of the very best books available is *Managerial Accounting for the Hospitality Industry*.

You can review the latest edition of the book at www.wiley.com. Enter the title in the search bar to explore the book’s table of contents and, if you wish, to place an order.

INCOME STATEMENT (USAR FORMAT)

The income statement is a summary report that describes the sales achieved, the money spent on expenses, and the resulting profit generated by a business in a specific time period. Despite its formal title as the “statement of income and expense,” it is popularly referred to as the income statement, the profit and loss statement, or the P&L, the shortened title introduced in Chapter 1.

The P&L is a manager’s most important tool for cost control. Properly designed P&Ls show the revenue and expenses of a business at a level of detail deemed best by the owners of the business and that conforms to the appropriate uniform system of accounts (e.g., for restaurants, hotels, clubs, or other industry segment).

P&Ls show the operating profits of a business. But the word profit can mean different things to different managers; therefore, the P&L statement can be somewhat confusing if you are not familiar with it. To see why, assume that someone asked you how much money you “made” on your last job. You could answer by telling the amount of gross earnings you achieved (your pay before taxes), or you could just as accurately answer by telling your net earnings (after-tax earnings) or your *take-home* pay. In either case, you would be accurately communicating the amount that you “earned,” but the two answers you would provide would be very different. In a similar manner, some business operators consider profit to be what they earn before they pay income taxes, whereas others reserve the term *profit* for their after-income tax earnings.

A precise definition of exactly what is meant by the term *profit* must be established for each P&L statement if it is to be helpful and communicate information accurately. In all cases, however, one purpose of the P&L statement is to identify **net income**, which is the profit generated after all expenses of the business have been paid.

Figure 9.1 details two years of P&L statements presented in a USAR-recommended format for Joshua’s Inc., a foodservice complex that includes a cocktail lounge, two

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FIGURE 9.1 Joshua's Income Statement (P&L)¹

Joshua's Inc.				
Last Year versus This Year				
	Last Year	%	This Year	%
SALES				
Food	\$ 1,891,011	82.0%	\$ 2,058,376	81.0%
Beverage	415,099	18.0%	482,830	19.0%
Total Sales	\$2,306,110	100.0%	\$2,541,206	100.0%
COST OF SALES				
Food	\$ 712,587	37.7%	\$ 767,443	37.3%
Beverages	94,550	22.8%	96,566	20.0%
Total Cost of Sales²	\$ 807,137	35.0%	\$ 864,009	34.0%
LABOR				
Management	\$128,219	5.6%	\$ 142,814	5.6%
Staff	512,880	22.2%	571,265	22.5%
Employee Benefits	99,163	4.3%	111,813	4.4%
Total Labor	\$ 740,262	32.1%	\$ 825,892	32.5%
PRIME COST	\$1,547,399	67.1%	\$1,689,901	66.5%
OTHER CONTROLLABLE EXPENSES				
Direct Operating Expenses	\$ 122,224	5.3%	\$132,143	5.2%
Music & Entertainment	2,306	0.1%	7,624	0.3%
Marketing	43,816	1.9%	63,530	2.5%
Utilities	73,796	3.2%	88,942	3.5%
General & Administrative Expenses	66,877	2.9%	71,154	2.8%
Repairs & Maintenance	34,592	1.5%	35,577	1.4%
Total Other Controllable Expenses	\$ 343,611	14.9%	\$ 398,970	15.7%
CONTROLLABLE INCOME	\$ 415,100	18.0%	\$ 452,335	17.8%
NON-CONTROLLABLE EXPENSES				
Occupancy Costs	\$ 120,000	5.2%	\$ 120,000	4.7%
Equipment Leases	–	0.0%	–	0.0%
Depreciation & Amortization	41,510	1.8%	55,907	2.2%
Total Non-controllable Expenses	161,510	7.0%	175,907	6.9%
RESTAURANT OPERATING INCOME	\$ 253,590	11.0%	\$ 276,428	10.9%
Interest Expense	86,750	3.8%	84,889	3.3%
INCOME BEFORE INCOME TAXES	\$ 166,840	7.2%	\$ 191,539	7.5%
Income Taxes	65,068	2.8%	76,616	3.0%
NET INCOME	\$ 101,772	4.4%	\$ 114,923	4.5%

¹ Income Statement format is based on the *USAR*, 8th ed., with the inclusion of income taxes and net income.

² All percentages are computed as a percentage of Total Sales except Cost of Sales line items, which are based on their respective category sales.

dining areas, and banquet space. Joshua prepares his P&L statement for the calendar year period of January 1 through December 31.

In some operations, a fiscal year that differs from a calendar year (see Chapter 4) is used to prepare P&Ls. Fiscal year reporting may be used in seasonal resorts, noncommercial facilities such as schools and colleges, and any other situation in which it makes good sense for the operation to do so.

P&Ls should be prepared for any accounting period that is helpful to management. As a result, managers may prepare annual, quarterly, monthly, or even weekly P&Ls.

As can be seen in Figure 9.1, last year Joshua's operation generated \$2,306,110 in total sales and achieved a net income of \$101,772. This year, when the corporation generated total sales revenue of \$2,541,206, Joshua achieved a net income of \$114,923. The question Joshua must ask himself, of course, is, "How good is this performance?"

It is important to note that each food service operation's P&L statement could be formatted slightly differently than the P&L shown in Figure 9.1 even when it follows the *USAR*. All income statements, however, typically will take a very similar, rather than identical, approach to reporting revenue and expense.

Note that, although the detail is much greater, the layout of Joshua's P&L is similar in structure to the abbreviated P&L presented in Chapter 1 as Figure 1.3. Both statements list revenue first, then expenses, and finally, the difference between the revenue and expense figures. If this number is positive, it represents a profit. If expenses exceed revenue, a loss, represented by a negative number or a number in brackets, is shown. Operating at a loss is often referred to as operating "in the red," based on an old practice of using red ink to write down debts or losses. Regardless of the color of the ink, operating at a loss can cause an operator to shed a few tears!

To help ensure that your operation does not produce a loss, you need to know some important components of the *USAR* income statement format. The *USAR* can best be understood by dividing it into four major sections: (1) sales, (2) prime cost, (3) other controllable expenses, and (4) non-controllable expenses.

Referring to Figure 9.1, the Sales category includes the revenue generated by all of the food and beverage purchases made by Joshua's guests. The Prime Cost section of Joshua's P&L details the amount that was spent for food and beverages as well as the total amount spent for labor. **Prime cost** is defined as an operation's total cost of sales added to its total labor cost. Prime cost is clearly listed on the P&L because it is an excellent indicator of management's ability to control cost of sales and labor; the two largest expenses in most food service operations.

The prime cost concept is important because when prime costs are excessively high it makes it very difficult to generate a sufficient amount of profit in a food service operation. This can be so even when controllable and non-controllable other expenses are kept well in line. While each restaurant operation is different, prime costs in the range of 60 to 70 percent are common for full-service operations, while prime costs below 60 percent are most common in limited or quick service operations.

The Other Controllable Expenses categories for Joshua's include entries for:

- Direct operating expenses
- Music & entertainment
- Marketing
- Utilities
- General & administrative expenses
- Repairs & maintenance

The Non-controllable Expenses categories listed on Joshua's P&L include:

- Occupancy costs
- Equipment leases
- Depreciation and amortization

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Although interest expense and income taxes are not included in the non-controllable expenses section of the *USAR*-format P&L, they are commonly regarded as nonoperating, and non-controllable expenses. Therefore, these costs can be assessed within the fourth section of the income statement.

Note that, when following the *USAR*, the foodservice manager arranges the four main sections of a P&L in order from most controllable to least controllable. Knowing what the four main sections of the income statement contain allows you to focus on those things over which you have the most control as a foodservice manager. When you focus on these controllable areas, you can better manage your time and make the most out of your efforts to control costs.

Managers most often choose **restaurant operating income** (the operating income subtotal before interest expense is subtracted) or **income before income taxes** (the operating income after interest expense is subtracted, but before income taxes are subtracted) as the most relevant indicators of management performance. This is because most managers do not have interest expenses or taxes in their direct span of control. As you know, the government controls taxes; to paraphrase Benjamin Franklin, the only sure things in life are death and taxes. So, the foodservice manager has little control over the amount of money “Uncle Sam” gets every year. Regardless of the specific income subtotal assessed, in all cases managers must be clear about how it will reflect on their ability to manage the operation based on their control (or lack of control) of the costs represented by the subtotal.

Note, also, that each revenue and expense category in Figure 9.1 is expressed both in terms of its whole dollar amount and its percentage of total sales. All ratios are calculated as a percentage of total sales except the following:

- Food costs are divided by food sales.
- Beverage costs are divided by beverage sales.

When calculating food and beverage cost percentages, the food and beverage expenses are the numerator while their respective food and beverage sales are the denominator. Food costs and beverage costs are among the most controllable items on the income statement; thus it helps Joshua to separate these sales and costs out of the aggregate and evaluate these individual expense areas more carefully. Notice, also, that Joshua’s accountant presents this year’s P&L statement along with last year’s P&L statement in a side-by-side comparison because this can help Joshua assess changes in costs and analyze trends in his business.

Another facet of the uniform system of accounts that you should know about is the supporting schedule. The income statement as shown in Figure 9.1 is an **aggregate statement**. This means that all details associated with the sales, costs, and profits of the foodservice establishment are summarized on the P&L statement. Although this summary gives the manager an overall look at the performance of the operation, detailed expenses within each cost category are not included directly on the statement. These details can be found in **supporting schedules**. Each line item on the income statement should be accompanied by a supporting schedule that outlines all of the information that the manager needs to know about that category to operate the business successfully.

For example, in Figure 9.1, Direct Operating Expenses could have an accompanying supporting schedule that details costs incurred for uniforms, laundry and linen, china and glassware, silverware, and the like. These expenses can also be broken down by percentage of total direct operating expenses. In addition, the supporting schedule should have a column in which notes can be made about the costs it includes.

Figure 9.2 is an example of a supporting schedule that would accompany Joshua’s Income Statement (Figure 9.1). Note that the Total Direct Operating Expenses, \$132,143 in the Direct Operating Expense Schedule, matches exactly with this year’s Direct Operating Expenses as listed on the income statement.

The type of information and the level of detail that are included on supporting schedules are left up to the manager, based on what is appropriate for the manager’s

FIGURE 9.2 Direct Operating Expenses Schedule

Type of Expense	Expense	% of Direct Operating Expenses	Notes
Uniforms	\$ 13,408	10.15%	
Laundry and Linen	40,964	31.00%	
China and Glassware	22,475	17.01%	Expense is higher than budgeted because china shelf collapsed on March 22.
Silverware	3,854	2.92%	
Kitchen Utensils	9,150	6.92%	
Linen	2,542	1.92%	
Cleaning Supplies	10,571	8.00%	
Paper Supplies	2,675	2.02%	
Bar Uniforms	5,413	4.10%	
Menus and Wine Lists	6,670	5.05%	Expense is lower than budgeted because the new wine supplier agreed to print the wine lists free of charge.
Exterminating	1,803	1.36%	
Flowers and Decorations	9,014	6.82%	
Licenses	3,604	2.73%	
Total Direct Operating Expenses	\$132,143	100.00%	

operation. The schedules are used to collect the information needed to give additional detail about sales or costs and to determine problem areas and potential opportunities for improving each item on the income statement.

The P&L statement is only one of several documents owners use to help evaluate the success of a business. The P&L statement alone, however, yields important information that is critical to the development of future management plans and budgets.

The analysis of P&L statements is a fun and very creative process if basic procedures are well understood. In general, managers who seek to discover all that their P&L will tell them undertake the following areas of analysis:

1. Sales/volume
2. Food expense
3. Beverage expense
4. Labor expense
5. Other controllable and non-controllable expense
6. Profits

Using the data from Figure 9.1, each of these areas will be reviewed in order.

ANALYSIS OF SALES/VOLUME

As discussed earlier in this text, foodservice operators can measure sales in terms of either dollars generated or number of guests served. In both cases, an increase in sales volume is usually to be desired. A sales increase or decrease must, however, be analyzed carefully if you are to truly understand the revenue direction of your business.

STEPS IN COMPUTING SALES MEASURES

Consider the sales portion of Joshua's P&L statement, as detailed in Figure 9.3. Based on the data from Figure 9.3, Joshua can compute his overall sales increase or decrease using the following steps:

- Step 1.** Determine sales for this accounting period.
- Step 2.** Calculate the following: this period's sales minus last period's sales.
- Step 3.** Divide the difference in Step 2 by last period's sales to determine the sales percentage variance (increase or decrease).

For Joshua, the sales percentage variance is as indicated in Figure 9.4. To illustrate the steps outlined for calculating sales variance using Total Sales as an example, we find:

- Step 1.** \$2,541,206
- Step 2.** \$2,541,206 – \$2,306,110 = \$235,096
- Step 3.** \$235,096 ÷ \$2,306,110 = 10.2%

The P&L statement shows Joshua has achieved an overall increase in total sales of 10.2 percent. There are several ways total sales could have increased in the current year:

- 1. The same number of guests was served, but at a higher check average.
- 2. More guests were served at the same check average.
- 3. More guests were served at a higher check average.
- 4. Fewer guests were served, but at a higher check average.

FIGURE 9.3 Joshua's P&L Sales Comparison

Sales	Last Year	% of Sales	This Year	% of Sales
Food Sales	\$1,891,011	82.0%	\$2,058,376	81.0%
Beverage Sales	415,099	18.0%	482,830	19.0%
Total Sales	\$2,306,110	100.0%	\$2,541,206	100.0%

FIGURE 9.4 Joshua's P&L Sales Variance

Sales	Last Year	This Year	Variance	Variance %
Food Sales	\$1,891,011	\$2,058,376	\$167,365	+ 8.9%
Beverage Sales	415,099	482,830	67,731	+16.3%
Total Sales	\$2,306,110	\$2,541,206	\$235,096	+10.2%

FIGURE 9.5 Joshua's P&L Sales Comparison with 5% Menu Price Increase

Sales	Last Year	Adjusted Sales (Last Year $\times$ 1.05)	This Year	Variance	Variance %
Food Sales	\$1,891,011	\$1,985,561.55	\$2,058,376	\$ 72,814.45	+ 3.67%
Beverage Sales	415,099	435,853.95	482,830	46,976.05	+10.78%
Total Sales	\$2,306,110	\$2,421,415.50	\$2,541,206	\$119,790.50	+ 4.95%

To examine which of these possibilities was responsible for the total sales increase, Joshua may need to apply a sales adjustment technique. To see why, assume that Joshua raised his prices for food and beverage by 5 percent at the beginning of the year. If this was the case, and he wishes to determine his actual sales increase, he must first consider the impact of that 5 percent menu price increase. The procedure he would use to adjust his sales variance to include the menu price increases is as follows:

Step 1. Increase the prior-period (last year) sales by the amount of the price increase.

Step 2. Subtract the result in Step 1 from this period's sales.

Step 3. Divide the difference in Step 2 by the value of Step 1.

Thus, in our example, Joshua would follow these steps to determine his real (after selling price adjustments) sales increase.

In the case of total sales, the procedure would be as follows:

Step 1. $\$2,306,110 \times 1.05 = \$2,421,415.50$

Step 2. $\$2,541,206 - \$2,421,415.50 = \$119,790.50$

Step 3. $\$119,790.50 \div \$2,421,415.50 = 4.95\%$

Figure 9.5 details the results that are achieved if this 5 percent adjustment process is completed for all sales areas. Joshua's total sales figure would be up this year by 4.95 percent if he adjusted it for a 5 percent menu price increase. Thus, although Joshua's overall sales did increase significantly this year, approximately half of the increase was due to increased menu prices rather than to additional guest purchases.

There is still more, however, that the P&L can tell Joshua about his sales. If he has kept accurate guest count records, he can compute his sales per guest (check average) amount. With this information, he can determine whether his sales are up because he is serving more guests or because he is serving the same number of guests but each one is spending more per visit or because some of both has occurred.

In fact, if each guest is spending quite a bit more per visit, Joshua may even have experienced a *decrease* in total guest count yet still achieved an increase in total sales. If this were the case, he would want to know about it because it may be quite unrealistic to assume that revenue will continue to increase over the long run if the number of guests visiting the establishment is declining.

OTHER FACTORS INFLUENCING SALES ANALYSIS

In some foodservice operations special factors must be taken into consideration before sales revenue can be accurately analyzed. To illustrate, consider the situation you would face if you owned a restaurant across the street from a professional basketball arena. If you were to prepare a P&L that compared sales from this May to sales generated last May, the number of home basketball games in May for this professional team in each of the two periods (which could vary) would have to be determined before you could make valid conclusions about guest count increases or decreases because the number of home games would directly affect your sales levels.

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FIGURE 9.6 Hot Dog! Sales Data

	Last Year	This Year	Variance	Variance %
Total Sales (October)	\$17,710.00	\$17,506.00	–\$ 204	–1.2%
Number of Operating Days	22 days	21 days	1 day	
Average Daily Sales	\$ 805.00	\$ 833.62	\$28.62	+3.6%

Similarly, if a foodservice facility is open only Monday through Friday, the number of operating days contained in two given accounting periods may be different for the facility. When this is the case, percentage increases or decreases in sales volume must be based on average daily sales, rather than the total sales figure.

To illustrate this, consider Hot Dog!, a hot dog stand that operates in the city center of a large metropolitan area only on Monday through Friday. In October of this year, the stand was open for 21 operating days. Last year, however, because of the number of weekdays and weekend days in October, the stand operated for 22 days. Figure 9.6 details the comparison of sales for the stand, assuming no increase in menu selling prices this year when compared with last year's selling prices.

At first glance, it would appear that October sales this year are 1.2 percent lower than last year, but in reality, average daily sales are up 3.6 percent! Are sales for October up or down? Clearly, the answer must be qualified in terms of monthly or daily sales. For this reason, effective foodservice managers must be careful to consider all of the relevant facts before making determinations about an operation's overall sales direction.

Every critical factor must be considered when evaluating sales revenue, including the number of operating meal periods or days; changes in menu prices, guest counts, and check averages; and holidays and special events. Only after carefully reviewing all details of this type can you truly assess whether an operation's sales are increasing or decreasing.

ANALYSIS OF FOOD EXPENSE •

In addition to sales analysis, the P&L statement, whether created weekly, monthly, quarterly, or annually, provides information about other areas of operational interest. For the effective foodservice manager, the analysis of food expense is a matter of major concern.

Figure 9.7 details the food expense portion of Joshua's P&L as detailed in the Cost of Sales: Food Expense Schedule.

FIGURE 9.7 Joshua's P&L Cost of Sales: Food Expense Schedule

	Last Year	% of Food Sales	This Year	% of Food Sales
Food Sales	\$1,891,011	100.0%	\$2,058,376	100.0%
Cost of Sales: Food				
Meats and Seafood	297,488	15.7%	\$ 343,063	16.7%
Fruits and Vegetables	94,550	5.0%	127,060	6.2%
Dairy	55,347	2.9%	40,660	2.0%
Baked Goods	16,142	0.9%	22,870	1.1%
Other	249,060	13.2%	233,790	11.4%
Total Cost of Food Sales	\$ 712,587	37.7%	\$ 767,443	37.3%

FIGURE 9.8 Joshua's P&L Variation in Food Expense by Category

Category	Last Year %	This Year %	Variance %
Meats and Seafood	15.7	16.7	+1.0
Fruits and Vegetables	5.0	6.2	+1.2
Dairy	2.9	2.0	−0.9
Baked Goods	0.9	1.1	+0.2
Other	13.2	11.4	−1.8
Total Cost of Food Sold %	37.7	37.4	−0.4

It is important to remember that the numerator of the food cost percentage equation is cost of food sold, whereas the denominator is total food sales, rather than total food and beverage sales.

With total cost of food sold this year of \$767,443, and total food sales of \$2,058,376, the total food cost percentage is 37.3 percent ($\$767,443 \div \$2,058,376 = 37.3\%$). A food cost percentage can be computed in a similar manner for each subcategory of food. For instance, the food cost percentage for the category Meats and Seafood for this year would be computed as follows:

$$\frac{\text{Meats and seafood costs}}{\text{Total food sales}} = \text{Meats and seafood cost \%}$$

or

$$\frac{\$343,063}{\$2,058,376} = 16.7\%$$

At first glance, it appears that Joshua has done well for the year and that his total cost of goods sold expense has declined 0.4 percent, from 37.7 percent overall last year to 37.3 percent this year. This is true. Closer inspection of Figure 9.7, however, indicates that, although the categories Dairy and Other showed declines, Meats and Seafood, Fruits and Vegetables, and Baked Goods showed increases.

Figure 9.8 shows the actual differences in food cost percentage for each of Joshua's food categories. Although it is true that Joshua's overall food cost percentage is down

Cost Control Around the World

You have learned that the *USAR* contains suggestions for preparing income statements primarily for businesses operated in the United States. However, income statements prepared in other countries can vary in format from the income statements prepared according to *USAR* recommendations. One good example of this relates to the concept of profits. In the United Kingdom, for example, income statements are routinely prepared in a way that clearly indicates an operation's **gross profit**. Gross profit is calculated as:

$$\text{Total sales} - \text{Total cost of sales} = \text{Gross profit}$$

Many operators feel gross profit is a key number because it assesses food and beverage sales and those food and beverage-related costs that can and should be directly controlled by the manager on a daily basis. Earlier editions of the *USAR* actually included gross profit calculations, but the most recent edition does not. In many other countries, however, gross profit remains a key entry on the income statement.

The proper preparation of income statements and understanding the concept of gross profit are both good examples of the expanded knowledge many food service managers must have when they are responsible for businesses operating in countries that establish their own preferred systems for reporting a food service unit's operating results.

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by 0.4 percent, the variation among categories is quite significant. It is clearly to his benefit to subcategorize food products so that he can watch for fluctuations within and among groups rather than merely monitor his increase or decrease in overall food costs. Without such a breakdown of categories, he will not know exactly where to look if food costs get too high.

Sometimes food costs rise because the purchase prices of needed ingredients rise. In other cases, food costs rise because too much food is held in inventory, resulting in excessive product loss or theft. It would be helpful for Joshua to determine how appropriate the inventory levels are for each of his product subgroups so that he can adjust the inventory sizes if needed. To do this, Joshua must be able to compute his food inventory turnover.

FOOD INVENTORY TURNOVER

Inventory turnover refers to the number of times the total value of an operation's inventory has been purchased and replaced in an accounting period. Each time the cycle is completed once, we are said to have "turned" the inventory. For example, if you normally keep \$100 worth of oranges on hand at any given time and last month's usage of oranges was \$500, you would have replaced your orange inventory five times that month. The formula used to compute a food inventory turnover is:

$$\frac{\text{Cost of food consumed}}{\text{Average inventory value}} = \text{Food inventory turnover}$$

Note that it is cost of food consumed (see Chapter 5), rather than cost of food sold, that is used as the numerator in this ratio. This is because all food usage should be tracked so that you can better determine what is sold, wasted, spoiled, pilfered, and provided to employees as employee meals.

Inventory turnover is a measure of how many times an operation's inventory value is purchased and sold to guests. In the foodservice industry, we are, of course, interested in high inventory turnover as it relates to increased sales. If a 5 percent profit is made on the sale of an inventory item, we would like to sell (turn) that item as many times per year as possible. If, in this example, the item were sold from inventory only once per year, one 5 percent profit would result. If the item turned 10 times, however, a 5 percent profit on each of the 10 sales would result. But managers must ensure that a high inventory turnover is caused by increased sales and not by increased food waste, food spoilage, or employee theft.

Joshua can compute an overall food inventory turnover or he can compute inventory turnovers for each of his food categories. To compute his inventory turnover for each food category Joshua must first establish his average inventory value for each food category. The average inventory value is computed by adding the beginning inventory value for a food category for this period to the ending inventory value of the food category for this period and then dividing by two, using the following formula:

$$\frac{\text{Beginning inventory value} + \text{Ending inventory value}}{2} = \text{Average inventory value}$$

From his inventory records, Joshua creates the data recorded in Figure 9.9.

To illustrate the computation of average inventory value, note that Joshua's Meats and Seafood beginning inventory for this year was \$16,520, whereas his ending inventory for that category was \$14,574. His average inventory value for

FIGURE 9.9 Joshua's P&L Average Inventory Values

Inventory Category	This Year Beginning Inventory	This Year Ending Inventory	Average Inventory Value
Meats and Seafood	\$16,520	\$14,574	\$15,547
Fruits and Vegetables	1,314	846	1,080
Dairy	594	310	452
Baked Goods	123	109	116
Other	8,106	9,196	8,651
Total	\$26,657	\$25,035	\$25,846

that category is \$15,547 $[(\$16,520 + \$14,574) \div 2 = \$15,547]$. All other categories and the total average inventory value are computed in the same manner.

Now that Joshua has determined the average inventory values for his food categories, he can compute the inventory turnovers for each of these. As you recall from Chapter 5, Cost of Food Consumed is identical to Cost of Food Sold when no reduction is made in cost as a result of employee meals. That is the case at Joshua's facility because he charges employees full price for menu items that he sells to them as employee meals. Therefore, employee meals are included in regular food cost because a normal food sales price is charged for these meals. Figure 9.10 shows the result of his computations using the food inventory turnover formula for this year.

To illustrate, Joshua's Meats and Seafood inventory turnover is 22.1 $(\$343,063 \div \$15,547 = 22.1)$. That is, Joshua purchased, sold, and replaced his meat and seafood inventory, on average, 22 times this year. Note that all other food categories and the total inventory turnover are computed in the same manner. Note also that in categories such as fruits and vegetables, dairy, and baked goods, the turnovers are very high, reflecting the perishability of these items. Joshua's overall inventory turnover is 29.7.

If Joshua's *target* inventory turnover for the year was 26 times (every two weeks), then he should investigate why his actual inventory turnover is higher. It could be because of his increase in sales, which is a good sign of his restaurant's performance. Or it could be due to excessive waste, pilferage, or spoilage.

Alternatively, if his inventory turnover was less than 26 times per year, and his target was 26 times, the difference could be due to lower sales or overstocking of his inventory. Joshua could be buying excess inventory at a bulk discount (which is an intentional management decision to save money), or he might be purchasing too much due to poor inventory management. He should use inventory turnover analysis to help him determine how he can most effectively control his product costs in the future.

FIGURE 9.10 Joshua's P&L Food Inventory Turnover

Inventory Category	Cost of Food Consumed	Average Inventory	Inventory Turnover
Meats and Seafood	\$343,063	\$15,547	22.1
Fruits and Vegetables	127,060	1,080	117.6
Dairy	40,660	452	90.0
Baked Goods	22,870	116	197.2
Other	233,790	8,651	27.0
Total/ Average	\$767,443	\$25,846	29.7

ANALYSIS OF BEVERAGE EXPENSE

Joshua's P&L (Figure 9.1) shows beverage sales for this year of \$482,830. With total sales of \$2,541,206, beverages represent 19 percent of Joshua's total sales ($\$482,830 \div \$2,541,206 = 19\%$). Also from Figure 9.1, beverage costs for this year are shown as \$96,566; thus, Joshua's beverage cost percentage, which is computed as cost of beverages divided by beverage sales, is 20 percent ($\$96,566 \div \$482,830 = 20\%$).

To completely analyze the beverage expense category, Joshua would compute his beverage cost percentage, compare that to his planned or targeted beverage expense, and compute a beverage inventory turnover rate using the same inventory turnover formula he utilized for his food products.

If an operation carries a large number of rare and expensive wines, its overall beverage inventory turnover rate will be relatively low. Conversely, those beverage operations that sell their products such as beer and spirits primarily by the glass are likely to experience inventory turnover rates that are quite high. The important concept here is to compute the turnover rates at least once per year (or more often if needed) to gauge whether inventory sizes should be increased or decreased.

High beverage inventory turnovers accompanied by frequent product outages may indicate inventory levels that are too low, whereas low inventory turnover rates and many slow-moving inventory items may indicate the need to reduce beverage inventory levels.

Figure 9.1 shows that last year's beverage cost percentage was 22.8 percent ($\$94,550 \div \$415,099 = 22.8\%$). This, at first glance, would indicate that beverage costs have been reduced, not in total dollars spent, because sales were higher this year than last year, but in percentage terms. In other words, a beverage cost percentage of 22.8 percent last year versus 20 percent this year indicates a 2.8 percent overall reduction.

Assume, for a moment, however, that Joshua raised drink prices by 10 percent this year over last year. Assume also that Joshua pays, on average, 5 percent more for beverages this year compared with last year. After making those assumptions, is his beverage operation more efficient this year than last year, less efficient, or the same? To determine the answer to this important question in the beverage or any other expense category, Joshua must make adjustments to both his sales and his cost figures. Similar to the method for adjusting sales, the method for adjusting expense categories for known cost increases is as follows:

Step 1. Increase the prior-period expense by the amount of the cost increase.

Step 2. Determine appropriate sales data, remembering to adjust prior-period sales, if applicable.

Step 3. Divide costs determined in Step 1 by sales determined in Step 2.

Thus, in our example, Joshua's beverage expense last year, adjusted for this year's costs, would be $\$94,550 \times 1.05 = \$99,277.50$.

His beverage sales from last year, adjusted for this year's menu prices, would be $\$415,099 \times 1.10 = \$456,608.90$.

His last year's beverage cost percentage, adjusted for increases in this year's costs and selling prices, would be computed as follows:

$\frac{\$99,277.50}{\$456,608.90} = 21.7\%$

In this case, Joshua's real cost of beverage sold has, in fact, declined this year, although not by as much as he had originally thought. That is, a 21.7 percent adjusted cost for last year versus a 20 percent cost for this year equals a reduction of 1.7 percent, not 2.8 percent as originally determined.

In nearly all cases, food and beverage expense categories must be adjusted in terms of both their costs and menu selling prices if truly accurate comparisons are to be made over longer periods of time. For example, when older foodservice managers remember back to the time when they purchased hamburger for \$0.59 per pound, it is important to recall that the quarter-pound hamburger they made from it may have sold for \$0.59 also! The 25 percent resulting product cost percentage is no different from today's operator paying \$3.00 a pound for ground beef and selling the resulting quarter-pound burger for \$3.00.

It is not possible to compare efficiency in food and beverage usage from one time period to the next unless you are making that comparison in equal terms. As product costs increase or decrease and as menu prices change, they may affect changes in food and beverage expense percentages. As an effective manager, you must determine if variations in product usage and cost percentages are caused by real changes in your operation or simply by differences in the price you pay for your products or by changes in your selling (menu) prices.

ANALYSIS OF LABOR EXPENSE •

From Figure 9.1, it is interesting to note that, although the total dollars Joshua spent on labor increased greatly from last year to this year, his labor cost percentage increased only slightly. This was true in the Management and Staff categories, as well as the Employee Benefits category. Recall that whenever your labor costs are not 100 percent variable, increasing sales volume will help you decrease your labor cost percentage, while the total dollars you spend on labor will increase. The reason for this is simple. When total dollar sales volume increases, fixed labor cost percentages will decline. In other words, the dollars paid for fixed labor will consume a smaller percentage of your total revenue. Thus, as long as any portion of total labor cost is fixed (management's salaries, for example), increasing volume will have the effect of reducing an operation's labor cost percentage.

Variable labor costs increase with sales volume increases, but the percentage of revenue they consume should stay relatively constant. When you combine a declining percentage (fixed labor cost) with a constant percentage (variable labor cost), you should achieve a reduced overall percentage, although your total labor dollars expended will increase as sales increase.

Is important to note that serving additional guests will most often cost an operation additional labor dollars. That, in itself, is not a bad thing. In most foodservice situations, you want to serve more guests. If labor expenses are controlled properly you will find that an increase in the number of guests served, and the sales generated by these additional guests, will still result in increased labor costs required to service those guests. You must be careful, however, to always ensure that increased labor costs are at the appropriate level for increases achieved in sales volume.

Remember, too, that declining costs of labor are not always a sign that all is well in a foodservice unit. Declining costs of labor may be the result of significant reductions in the number of guests served. If, for example, a foodservice facility produces poor-quality products and provides poor service, guest counts can be expected to decline, as would the cost of labor required to service those guests who do remain. Labor dollars expended by management would decline, but it would be an indication of improper, rather than effective, management.

An effective foodservice manager seeks to achieve reductions in operational expense because of improved operational efficiencies, not because of reduced sales.

Figure 9.11 details the labor cost portion of Joshua's P&L. Note that all the labor-related percentages he computes are based on his total sales, that is, the combination of his food and beverage sales. This is different from computing expense percentages for food and beverages because food cost percentage is determined using food sales as the denominator and beverage cost percentage computations

304 Chapter 9 Analyzing Results Using the Income Statement**FIGURE 9.11** Joshua's P&L Labor Cost

Labor Cost	Last Year	% of Total Sales	This Year	% of Total Sales
Management	\$128,219	5.6%	\$142,814	5.6%
Staff	512,880	22.2%	571,265	22.5%
Employee Benefits	99,163	4.3%	111,813	4.4%
Total Labor Cost	\$740,262	32.1%	\$825,892	32.5%

use beverage sales as a denominator. Thus, Joshua's total management, staff and employee benefits expense percentage for this year is computed as:

$$\frac{\text{Total labor cost}}{\text{Total sales}} = \text{Labor cost \%}$$

or

$$\frac{\$825,892}{\$2,541,206} = 32.5\%$$

A brief examination of the labor portion of Joshua's P&L would indicate an increase in both dollars spent for labor and labor cost percentage. Just as adjustments must be made for changes in sales and food and beverage expenses before valid expense comparisons can be made, so too must adjustments be made for changes, if any, in the price an operator pays for labor.

In Joshua's case, assume that all employees were given a **cost of living adjustment (COLA)**, or pay raise, of 5 percent at the beginning of this year. Recall from Chapter 7 that this, coupled with an assumed 10 percent menu price increase, would indeed have the effect of changing the operation's overall labor cost percentage, even if its labor productivity did not change.

From Figure 9.11, Joshua can see that his actual labor cost percentage increased from 32.1 percent last year to 32.5 percent this year, an increase of 0.4 percent. To adjust for the changes in the cost of labor and his selling prices, if these indeed occurred, Joshua uses assessment techniques similar to those previously detailed in this chapter. Thus, based on the assumption of a 5 percent increase in the cost of labor and a 10 percent increase in the average menu selling price, he adjusts both sales and cost of labor, using the same steps as those employed for adjusting food or beverage cost percentage, and computes a new labor cost for last year as follows:

Step 1. Determine sales adjustment: $\$2,306,110 \times 1.10 = \$2,536,721$

Step 2. Determine total labor cost adjustment: $\$740,262 \times 1.05 = \$777,275.10$

Step 3. Compute adjusted labor cost percentage: $\$777,275.10 \div \$2,536,721 = 30.6\%$

As can be seen, last year Joshua's P&L would have indicated a 30.6 percent labor cost percentage *if* he had operated under this year's increased labor costs and this year's selling prices. This is certainly an area that Joshua would want to investigate. The reason is simple. If he were exactly as efficient this year as he was last year, and if he assumed a 10 percent menu price increase and a 5 percent labor cost increase, Joshua's cost of labor for this year should have been computed as follows:

$$\text{This year's sales} \times \text{Last year's adjusted labor cost \%} = \text{This year's projected labor cost}$$

or

$$\$2,541,206 \times 0.306 = \$777,609.04$$

Put in another way, if Joshua were just as efficient with his labor this year as he was last year, he would have expected to spend 30.6 percent of sales for labor this year, given his 5 percent payroll increase and 10 percent menu price increase. In actuality, Joshua's labor cost was \$48,282.96 higher (\$825,892 actual labor cost this year – \$777,609.04 projected labor cost this year = \$48,282.96). A variation in labor cost this large should obviously be of concern to Joshua, and he should examine it closely.

Increases in payroll taxes, benefit programs, and employee turnover can all affect labor cost percentage. Although, for our example, we assumed that employee benefits (including payroll taxes, insurance, etc.) increased at the same 5 percent rate as did salaries and wages, these are, of course, different expenses and may increase at rates higher or lower than salary and wage payments to employees. Indeed, one of the fastest-increasing labor-related costs for foodservice managers today is the cost of health insurance benefit programs. This is especially the case with the recent passage of the Patient Protection and Affordable Care Act (**Affordable Care Act**), the federal law mandating, in some situations, that foodservice employers provide health care insurance for their employees.

Controlling and evaluating total labor cost is an important part of your job as a hospitality manager. In fact, many managers feel it is more important to control labor costs than product costs because, for many of them, labor and labor-related benefit costs comprise a larger portion of their operating budgets than do food and beverage product costs.

ANALYSIS OF OTHER EXPENSES

An analysis of other expenses should be performed each time the P&L is produced. Figure 9.12 details the other expenses listed on Joshua's P&L statement.

Joshua's other expenses consist of both other controllable expenses and non-controllable expenses, and he must review these carefully.

FIGURE 9.12 Joshua's P&L Other Expenses

	Last Year	% of Total Sales	This Year	% of Total Sales
Other Controllable Expenses				
Direct Operating Expenses	\$122,224	5.3%	\$132,143	5.2%
Music & Entertainment	2,306	0.1%	7,624	0.3%
Marketing	43,816	1.9%	63,530	2.5%
Utilities	73,796	3.2%	88,942	3.5%
General & Administrative Expenses	66,877	2.9%	71,154	2.8%
Repairs & Maintenance	34,592	1.5%	35,577	1.4%
Total Other Controllable Expenses	\$343,611	14.9%	\$398,970	15.7%
Non-controllable Expenses				
Occupancy Costs	\$120,000	5.2%	\$120,000	4.7%
Equipment Leases	0	0%	0	0%
Depreciation & Amortization	41,510	1.8%	55,907	2.2%
Total Non-controllable Expenses	\$161,510	7.0%	\$175,907	6.9%

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In Joshua's operation, other expenses have increased from last year's levels. To see why, each individual expense category must be reviewed. Note that his Repairs and Maintenance expense category is higher this year than it was last year. This is one area in which he both expects and approves a cost increase. It is logical to assume that kitchen repairs will increase as a kitchen ages. In that sense, a kitchen is much like a car. Even with a good preventative maintenance program, Joshua does not expect an annual decline in kitchen repair expense. In fact, he would be somewhat surprised and concerned should this category be smaller this year than in the previous year because his sales were higher and likely caused more wear and tear on his one year older kitchen equipment.

In the same way, his contributions to his state and national association political action funds, charged to General and Administrative expenses, could be up significantly. This could be acceptable due to Joshua's belief that he, as part of the hospitality industry, needs to make his voice heard to his local and national political leaders. Because of that, membership in state and national trade associations simply make good sense and their costs are justified.

A complete analysis of other expenses could prove difficult for Joshua if he is not sure how he compares with others in his area or with operations of a similar nature. For comparison purposes he is able to use industry trade publications to get national averages on other expense categories. One helpful source Joshua can use is an annual publication, *The Restaurant Industry Operations Report*, published by the National Restaurant Association and prepared by Deloitte & Touche (it can be ordered through the National Restaurant Association's website).

For operations that are a part of a corporate chain, unit managers can most often receive comparison data from district and regional managers, who can supply performance information from similar units operating in the city, region, state, and nation.

Consider the Cost

"Wow!" I can't believe the size of the electricity bill this month," said Wendy. She was talking to Matt, the assistant manager of the Aussie Steakhouse in Phoenix, Arizona, where Wendy served as general manager.

"Is it higher than last month?" asked Matt.

"It's a lot higher," replied Wendy. "I thought it would be a little higher because it was really hot last month."

"So our usage was up?" asked Matt.

"Yes," said Wendy, "and the rate per kilowatt-hour we pay is up from last year, too. It seems like that rate goes up a little more every year."

"Is the bill so high it will affect our monthly bonus?" asked Matt. "I hope not," he continued, "because we had a great month last month, and I was really counting on the extra money in my next check."

"I don't know," said Wendy. "Let me get the calculator and we'll see."

1. What would be the likely effect on both the dollar amount and the cost of utilities as a percent of sales reported on the monthly P&L of the Aussie Steakhouse if there were:
 - a. An increase in the amount of electricity used in the restaurant?
 - b. An increase in the cost per unit (kilowatt-hour) of the electricity consumed?
 - c. An increase in the number of guests served by the restaurant?
2. In this scenario it appears that if the cost of other expenses in this restaurant is too high, its managers might not achieve their monthly bonus. Do you believe the cost of electricity is a controllable or non-controllable operating expense?
3. Regardless of your answer to the previous question, what are at least three specific actions Wendy and Matt could take to address their rising electricity costs?

ANALYSIS OF PROFITS

As can be seen in Figure 9.1, profit for Joshua's, Inc. is represented by the "net income" figure located at the bottom of the income statement. In fact, because of its location on the income statement, some managers even refer to this number as *the bottom line*.

In addition to being evaluated on the basis of their ability to generate profit dollars, foodservice managers are often evaluated on their ability to achieve targeted profit margins. A **profit margin** represents the amount of profit generated on each dollar of sales. Profit margin represents that portion of a dollar's sale that is returned to the operation in the form of profits. For that reason, profit margin is also referred to as **return on sales, or ROS**. This year, Joshua's profit margin is 4.5 percent. For each dollar of sales generated at Joshua's, 4.5 cents profit was made. Joshua calculates his profit margin using the following formula:

$$\frac{\text{Net income}}{\text{Total sales}} = \text{Profit margin}$$

or

$$\frac{\$114,923}{2,541,206} = 4.5\%$$

For the foodservice manager, perhaps no number is more important than profit margin (ROS). This percentage is often considered to be the most telling indicator of a manager's overall effectiveness at generating revenues and controlling costs in line with forecasted results.

Although it is not possible to state what a "good" ROS figure should be for all restaurants, industry averages, depending on the specific restaurant segment, can range from 1 percent to over 20 percent.

Some operators prefer to use Restaurant Operating Income (see Figure 9.1) as the numerator for their profit margin (ROS) calculations instead of Net Income. This is because, in most cases, an operation's interest expense is a cost established by the operation's owners, not its managers. As a result, amounts paid for interest are not truly reflective of a manager's ability to generate a profit.

Regardless of the manner in which profits are viewed, and profit margins are calculated, it is most important to recognize that food service operators ultimately bank "dollars" and not "percentages." Clearly, a manager whose operation achieves a 15 percent ROS on revenues of \$2,000,000 is going to generate more profits than a manager who achieves a 20 percent ROS on revenues of \$500,000. Because that is true, effective managers are concerned about both the dollar amount of profit they generate and their ROS percentage.

Joshua's ROS results of this year (\$114,923 or 4.5% of sales) represent an improvement over last year's figure of \$101,772, or 4.4 percent of total sales. Thus, he has shown improvement both in the dollar size of his net income and in the size of net income as related to total sales. In Chapter 2, you learned how to calculate a sales variance and a sales variance percentage. The variance amount and percentage variance between last year's net income and this year's net income can be calculated using similar formulas.

Joshua can compute the variance in his net income by subtracting net income last year from net income this year as follows:

$$\text{Net income this year} - \text{Net income last year} = \text{Net income variance}$$

or

$$\$114,923 - \$101,772 = \$13,151$$

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Joshua can then compute his net income variance percentage as follows:

$$\frac{\text{Net income this year} - \text{Net income last year}}{\text{Net income last year}} = \text{Percentage variance}$$

or

$$\frac{\$114,923 - \$101,772}{\$101,772} = 12.9\%$$

An alternative, and shorter, formula for computing the percentage variance is as follows:

$$\frac{\text{Variance}}{\text{Net income last year}} = \text{Percentage variance}$$

or

$$\frac{\$13,151}{\$101,772} = 12.9\%$$

Yet another way to compute the percentage variance is to use a math shortcut, as follows:

$$\frac{\text{Net income this year}}{\text{Net income last year}} - 1 = \text{Percentage variance}$$

or

$$\frac{\$114,923}{\$101,772} - 1 = 12.9\%$$

or

$$1.129 - 1 = 12.9\%$$

How much of this improvement is due to improved operational methods versus increased sales will depend, of course, on how much Joshua actually did increase his sales relative to increases in his costs. Monitoring selling price, guest count, sales per guest, operating days, special events, and actual operating costs is necessary for accurate profit comparisons. Without knowledge of each of these areas, the effective analysis of profits becomes a risky proposition.

HERE'S HOW IT'S DONE *9.1*

Sometimes managers simply want to know the difference between two numbers. For example, they may want to know the difference between the amount of money spent this year for food compared to the amount of money spent for food last year, or the amount of profit earned this year compared to the amount of profit earned last year. Calculating the difference, or variance, between any two numbers simply requires the use of subtraction.

Sometimes, however, managers know they will gain more information when they calculate the percentage variance between two numbers. Calculating a percentage variance is a two-step process that is easy to do once you learn how.

To illustrate, assume you wish to calculate the percentage variance between last year's profits and this year's profits. Last year's profit was \$300,000. This year's

profit is \$310,500. The two-step process for calculating variance percentage in this example is:

- Step 1.** Subtract last year's number from this year's number. In this example, that would be:

$$\$310,500 - \$300,000 = \$10,500$$

- Step 2.** Divide the difference calculated in Step 1 by last year's number. In this example, that would be:

$$\$10,500 \div \$300,000 = .035, \text{ or } 3.5\%$$

That tells the manager that this year's profit is 3.5 percent *higher* than last year's profit.

Or, you can use a shortcut by dividing this year's number by last year's number and subtracting 1. In this example, that would be:

$$(\$310,500 \div \$300,000) - 1 = 3.5\%$$

The identical two-step process works when a number from this year is *smaller* than a number from last year. To illustrate, assume last year's profit was \$312,000 and

profit this year is \$297,600. The two-step process for calculating variance percentage in this case is:

- Step 1.** Subtract last year's number from this year's number. In this example, that would be:

$$\$297,600 - \$312,000 = -\$14,400 \text{ (Note that this is a negative number!)}$$

- Step 2.** Divide the difference calculated in Step 1 by last year's number. In this example, that would be:

$$-\$14,400 \div \$312,000 = -.046, \text{ or } -4.6\%$$

That tells the manager that this year's profit was 4.6 percent *lower* than last year's profit.

Using the short cut again, you can divide this year's number by last year's number and subtract 1. In this example, that would be:

$$(\$297,600 \div \$312,000) - 1 = -4.6\%$$

With a little practice, you will be able to calculate and assess the percentage difference between any two numbers with ease!

Green and Growing!

Some foodservice operators think that adopting a sustainable, or "green," operations viewpoint inevitably means putting planet before profit. They would argue that businesses can survive only if they put profits first, so that is where their focus should be. In the long run, of course, an organization's purpose must include a focus on both profit and planet. It is true that an unprofitable business will not stay in business long. It is also true that "planet-friendly" management yields many positive financial outcomes for businesses, as well as for the health of the local communities these businesses count on to support them.

For example, the simple act of buying local (to minimize transportation costs and environmental impact)

produces an additional reward: community connection. Buying local creates relationships with those who produce food and keeps money flowing through a local economy, resulting in a healthier community.

There are additional positive outcomes from the local food movement. For example, as more hospitality businesses use local, seasonal, sustainably raised food, more fresh fruits and vegetables may be consumed, resulting in positive nutrition and health impacts within the community. The long-term result may be a reduction in health-care costs. Perceptive foodservice operators now clearly recognize that profits, planet, and people all benefit from an operation's green commitment.

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Technology Tools

This chapter introduced the concept of management analysis as it relates to sales, expenses, and profits. In this area, software is quite advanced, and there are many tools available to assist you. The best of these will help you:

1. Analyze operating trends (sales and costs) over management-established time periods.
2. Analyze food and beverage costs.
3. Analyze labor costs.
4. Analyze other expenses.
5. Analyze profits.
6. Compare operating results of multiple profit centers within one location or across several locations.
7. Interface with an operation's point-of-sale (POS) system or even incorporate it completely.
8. "Red flag" areas of potential management concern.
9. Evaluate the financial productivity of individual servers, day parts, or other specific time periods established by management.
10. Compare actual to budgeted results and compute variance percentages as well as suggest revisions to future budget periods based on current operating results.

Apply What You Have Learned

Terri Settles is a registered dietitian (RD). She supervises five hospitals for Maramark Dining Services, the management company the hospitals have selected to operate their foodservice operations. Her company produces a monthly and annual income statement for each hospital.

1. Discuss five ways in which income statements can help Terri do her job better.
2. What would a hospital do with "profits" or surpluses made in the food-service area?
3. What effect will "profit" or "loss" have on the ability of Terri's company to continue to manage the foodservice operations for these hospitals?

Key Terms and Concepts

The following are terms and concepts discussed in the chapter that are important for you as a manager. To help you review, please define the terms below.

cost accounting
managerial accounting
bookkeeping
certified management
accountant (CMA)
certified public
accountant (CPA)
Sarbanes-Oxley
Act (SOX)

uniform system of
accounts
net income
prime cost
restaurant operating
income
income before income
taxes
aggregate statement

supporting schedules
gross profit
inventory turnover
cost of living adjustment
(COLA)
Affordable Care Act
profit margin
return on sales (ROS)

Test Your Skills

You may download the Excel spreadsheets for the Test Your Skills exercises from the student companion website at www.wiley.com/college/dopson. Complete the exercises by placing your answers in the shaded boxes and answering the questions as indicated.

1. Jacob operates a Sicilian-themed restaurant that does a significant amount of carryout pizza business. Jacob's P&L has been designed to indicate the sales levels achieved in his dining room, carryout business, and bar. The revenue Jacob achieved this month and last month is indicated on the partial P&L shown below. Calculate Jacob's total sales for this month and last month as well as the variances and percentage variances in each of his revenue categories then answer the questions that follow.

Jacob's Restaurant				
	Last Month	This Month	Variance	Variance %
Sales				
Dining Room	\$84,500	\$86,250		
Carry-out	15,000	15,500		
Bar	13,500	12,750		
Total Sales				

- a. Did Jacob's total sales this month increase or decrease when compared to last month's sales?
 - b. In what revenue-producing area(s) did Jacob's sales increase?
 - c. In which sales area did Jacob experience the greatest dollar increase?
 - d. In which sales area did Jacob experience the greatest percentage increase?
 - e. In which sales area did Jacob's sales not improve?
2. Roscco Burnett is the manager of a New York-style delicatessen. Roscco's boss has established performance targets that determine the amount of bonus Roscco will receive each month. Roscco's performance is evaluated in five separate categories. Roscco receives a 2 percent bonus for each of the five targets he achieves. He earns a 2 percent bonus when:
 - a. His food cost is 30 percent or less.
 - b. His total cost of sales is 31 percent or less.
 - c. His labor cost is 22 percent or less for the "Staff" category.
 - d. His total labor cost is 35 percent or less.
 - e. His prime costs are less than 63 percent.

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If he achieves all five of his targets, the maximum bonus Roscco can achieve is 10 percent of his monthly salary. Review the targets established for Roscco's performance, complete Roscco's P&L Sales and Prime Cost sections, and then answer the question that follows.

Roscco's P&L Sales and Prime Cost		
	This Month	%
SALES		
Food	\$71,500	
Beverage	9,250	
Total Sales		
COST OF SALES		
Food	\$22,250	
Beverage	2,200	
Total Cost of Sales		
LABOR		
Management	\$ 4,750	
Staff	16,252	
Employee Benefits	6,225	
Total Labor Cost		
PRIME COST		

What percent of his monthly salary will Roscco receive as a bonus this month?

- Aafreen is the owner of a restaurant that features Pakistani and American cuisine. She operates on a calendar year and prepares a monthly P&L as well as a year-to-date (YTD) P&L. Aafreen is preparing her P&L for June. She has entered the amounts and calculated her percentages for the month. She has also entered her YTD revenue and expense amounts. Help Aafreen complete her P&L by calculating her missing YTD percentages.



Income Statement, June 201X				
	June	%	YTD	%
SALES				
Food	\$55,200	82.5%	\$331,200	
Liquor	4,450	6.7%	27,500	
Beer	3,550	5.3%	20,500	
Wine	3,700	5.5%	23,250	
Total Sales	\$66,900	100.0%	\$402,450	
COST OF SALES				
Food	\$17,150	31.1%	\$101,750	
Liquor	1,140	25.6%	6,400	
Beer	875	24.6%	4,850	
Wine	1,150	31.1%	8,750	
Total Cost of Sales	\$20,315	30.4%	\$121,750	
LABOR				
Management	\$ 4,750	7.1%	\$ 28,500	
Staff	13,525	20.2%	79,500	
Employee Benefits	4,225	6.3%	23,750	
Total Labor	22,500	33.6%	131,750	
PRIME COST	\$42,815	64.0%	\$253,500	
OTHER CONTROLLABLE EXPENSES				
Direct Operating Expenses	\$ 3,450	5.2%	\$ 22,450	
Music & Entertainment	275	0.4%	1,850	
Marketing	1,150	1.7%	7,250	
Utilities	1,850	2.8%	12,450	
General & Administrative Expenses	2,950	4.4%	18,150	
Repairs & Maintenance	950	1.4%	3,850	
Total Other Controllable Expenses	10,625	15.9%	66,000	
CONTROLLABLE INCOME	\$13,460	20.1%	\$ 82,950	
NON-CONTROLLABLE EXPENSES				
Occupancy Costs	\$ 5,900	8.8%	\$ 35,400	
Equipment Leases	1,150	1.7%	6,900	
Depreciation & Amortization	1,350	2.0%	8,500	
Total Non-controllable Expenses	\$ 8,400	12.6%	\$ 50,800	
RESTAURANT OPERATING INCOME	\$ 5,060	7.6%	\$ 32,150	
Interest Expense	725	1.1%	4,350	
INCOME BEFORE INCOME TAXES	\$ 4,335	6.5%	\$ 27,800	
Income Taxes	1,735	2.6%	11,120	
NET INCOME	\$ 2,600	3.9%	\$ 16,680	

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4. Faye manages Faye's Tea Room in a small suburban town. She sells gourmet food and a variety of teas. This year, Faye increased her selling prices by 5 percent, and she increased her wages by 10 percent. Faye's condensed P&L follows. Help her calculate her variance and variance percentage from last year to this year. Use her adjusted sales and labor cost to provide a more accurate picture of her performance this year.

Increase in Selling Prices					
Increase in Wages					
Faye's Condensed P&L					
	Last Year	Adjusted Sales and Labor (for Last Year)	This Year	Variance	Variance %
Sales	\$1,865,000		\$2,315,000		
Cost of Food	615,450		717,650		
Cost of Labor	540,850		671,350		
Other Expenses	428,950		486,150		
Total Expenses					
Profit					

5. a. Rudolfo owns Rudolfo's Italian Restaurante in the Little Italy section of New York City. He wants to compare last year's costs to this year's costs on his food expense schedule to see how he performed in each food category. Help Rudolfo complete his schedule.

Rudolfo's Food Expense Schedule				
	Last Year	% of Food Sales	This Year	% of Food Sales
Food Sales	\$2,836,517		\$3,087,564	
Cost of Food Sold				
Meats and Seafood	\$ 386,734		\$ 445,982	
Fruits and Vegetables	122,915		165,178	
Dairy	71,951		52,858	
Baked Goods	20,985		29,731	
Other	323,778		303,927	
Total Cost of Food Sold				

- b. In addition to calculating the food cost percentage for each of his food categories, Rudolfo wishes to calculate his inventory turnover for the year. Help Rudolfo complete his inventory turnover table below. Assume that cost of food sold, part a., and cost of food consumed, part b., are the same for Rudolfo's.

Rudolfo's inventory turnover target for this year was 32 times. Did he meet his target? If not, what may have caused this?

Rudolfo's Food Inventory Turnover					
Inventory Category	This Year's Beginning Inventory	This Year's Ending Inventory	Average Inventory Value	Cost of Food Consumed	Inventory Turnover
Meats and Seafood	\$21,476	\$17,489		\$445,982	
Fruits and Vegetables	\$ 1,708	\$ 1,015		\$165,178	
Dairy	\$772	\$372		\$ 52,858	
Baked Goods	\$160	\$131		\$ 29,731	
Other	\$10,538	\$11,035		\$303,927	
Total					

6. Jaymal is director of club operations for five military bases in Florida. He has just received year-end income statements for each base. Information from the revenue and labor portion of those statements is shown below. Jaymal wants to use the current year's data to create next year's budget. Assume that Jaymal is happy with his labor productivity in each unit and that both wages and revenue in each will increase 2 percent next year. Calculate how much Jaymal should budget for revenue and labor in each unit. Also, calculate what Jaymal's labor cost percentage will be for each unit if he meets his budget. (*Spreadsheet hint:* Use the ROUND function to one decimal place for Projected Labor Cost %.)

Projected increase in wages					
Projected increase in revenues					
	This Year's Results		Next Year's Budget		
Location	This Year's Labor Cost	This Year's Revenue	Projected Labor Cost	Projected Revenue	Projected Labor Cost %
Pensacola	\$ 285,000	\$ 980,500			
Daytona	\$ 197,250	\$ 720,000			
Fort Myers	\$ 235,500	\$ 850,250			
Tampa	\$ 279,750	\$ 921,750			
Miami	\$1,190,250	\$3,720,000			

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7. Ron MacGruder is senior vice president of acquisitions for Yummy Foods. Yummy is a large multinational food service company. It owns over 2,000 restaurants. Among its famous brands are a chain of pizza parlors, a Mexican carryout group, a chain of fried chicken stores, and a large group of fried fish stores. Ron is constantly on the lookout for growing food service concepts that could be purchased at a fair price and added to the Yummy group. One such concept that is currently available for sale is a small but expanding group of upscale Thai restaurants called Bow Thais. The current owners wish to sell the 17-unit chain and retire to Florida. They proudly point to the fact that both their sales and profits have increased in each of the last three years. Revenue has more than doubled this year compared to two years ago. Profits have risen from just \$600,000 two years ago to over \$1,000,000 this year. In addition, the Bow Thais chain consisted of 6 units two years ago, 12 units last year, and 17 units this year.

Develop a summary P&L for each of Bow Thais' last three years showing revenue, expenses, and profit. Next compute a "per unit" revenue, expense, profit, and profit margin level for each of the three years for which you have data.

Would you advise Ron to buy the company? Why or why not?

	Revenue	Expenses	Profit	No. of Units	Revenue per Unit	Expenses per Unit	Profit per Unit	Profit Margin %
2 Years Ago	\$ 6,500,000		\$ 600,000					
Last Year	\$ 9,900,000		\$ 800,000					
This Year	\$13,500,000		\$1,010,000					

8. Basil Bakal is the newly appointed food and beverage director at Telco Industries. Telco creates and markets software apps developed for use with iPods. The company has 500 employees and operates its own cafeteria and executive dining room, where it daily offers free lunches to all employees.

Basil's employee cafeteria serves between 375 and 425 lunches per day. Approximately 50 more meals per day are served in the executive dining room. Basil has created his own modified version of a P&L for use in his operation. Calculate the percentages of meals served in the employee cafeteria and executive dining room and the costs per meal served, and then answer the questions that follow.

- How much more did it cost (cost of sales per meal) Basil to serve a meal in the executive dining room than it did in the employee cafeteria? Why do you think that would be so?
- Basil's modified P&L combines all labor costs when calculating cost per meal served. Why do you think he elected not to allocate labor costs between the two serving areas? How could he do so?
- Assume you were on the board of directors of Telco. How would you decide how much more money you should allocate to Basil's area next year to account for rising food prices? Who would you expect to provide you with the information you need to make an informed decision about the appropriate size of this increase?

Telco Industries Food Services Department		
	Meals Served Last Year	% of Total Meals Served
NUMBER OF MEALS SERVED		
Cafeteria	104,250	
Executive Dining Room	12,150	
Total Served		
	Total Cost \$	Per Meal Cost \$
COST OF SALES		
Cafeteria	\$248,750	
Executive Dining Room	48,450	
Total Cost of Sales		
LABOR		
Management	73,332	
Staff	171,108	
Employee Benefits	61,110	
401(k) Match	25,350	
Total Labor		
PRIME COST		
OTHER CONTROLLABLE EXPENSES		
Direct Operating Expenses	113,515	
Utilities	96,000	
General & Administrative Expenses	46,669	
Repairs & Maintenance	21,510	
Total Other Controllable Expenses		

9. Lucir manages a German restaurant in a large western city. The restaurant's owner wants to know how well Lucir did this year at generating sales, controlling costs, and providing a profit. The owner promised Lucir that he would give her a raise if she increased return on sales (profit margin) by at least 1 percent. Complete Lucir's P&L.
- Should Lucir receive a raise?

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Lucir's P&L				
	Last Year	%	This Year	%
SALES				
Food	\$2,647,415		\$2,675,889	
Beverage	498,119		965,660	
Total Sales				
COST OF SALES				
Food	\$ 855,104		\$1,074,420	
Beverages	104,005		115,879	
Total Cost of Sales				
LABOR				
Management	\$ 192,330		\$ 204,227	
Staff	576,989		581,260	
Employee Benefits	118,996		122,994	
Total Labor				
PRIME COST				
OTHER CONTROLLABLE EXPENSES				
Direct Operating Expenses	\$ 146,669		\$ 145,357	
Music & Entertainment	2,767		8,386	
Marketing	52,579		69,883	
Utilities	88,555		97,836	
Administrative & General Expenses	80,252		78,269	
Repairs & Maintenance	41,510		39,135	
Total Other Controllable Expenses				
CONTROLLABLE INCOME				
NON-CONTROLLABLE EXPENSES				
Occupancy Costs	\$ 144,000		\$ 132,000	
Equipment Leases	0		0	
Depreciation & Amortization	49,812		61,498	
Total Non-controllable Expenses				
RESTAURANT OPERATING INCOME				
Interest Expense	104,100		93,378	
INCOME BEFORE INCOME TAXES				
Income Taxes	235,146		343,150	
NET INCOME				

10. In this chapter you learned that a P&L statement is used to report revenue, expense, and profit. In many cases, noncommercial foodservice operators, such as those responsible for schools, colleges and universities, and health-care facilities, including retirement complexes, nursing homes, and hospitals, are severely restricted in their ability to increase their revenues. This is because the operating budgets of such facilities are fixed annually based on the number of meals estimated to be served. Also, such facilities do not seek to earn a “profit” in the traditional sense of the word. In these non-commercial operations, however, the preparation and thoughtful analysis of monthly P&L statements is still considered essential. Why do you believe this is so?