

Chapter 6 – Financial Statements and Analysis

The Nonappropriated Fund Financial Statements for your activity serve as a report card, a financial history, and a management tool for continuing success. Financial statements provide information to both internal and external users. Internal users (such as managers) need detailed operating results, in enough detail to help them manage their operations. External users (such as headquarters personnel) need to see the “bigger picture,” in order to evaluate and compare operations worldwide.

In the civilian sector, different sets of financial statements may be prepared for different users. In military MWR/Services, a uniform system of accounts is provided by higher headquarters, to facilitate comparisons among activities in different markets. Financial statements are also used to evaluate the effectiveness of managers at every level. Clearly, even if only for their own self-interest, managers must understand financial statements!

There are four primary types of financial statements that make up what we collectively call “The Financial Statements” for an activity: (1) Balance Sheet, (2) Income Statement, (3) Statement of Cash Flow, and (4) Statement of Retained Earnings.

The Balance Sheet

The *balance sheet*, also called the *statement of financial position* or *statement of financial condition*, reflects the financial position of an activity at a point in time. It is often referred to as a *snapshot* of the activity’s financial condition at a given moment, usually the end of an established accounting period.

In MWR/Services, a balance sheet is typically done on the basis of each Nonappropriated Fund Instrumentality (NAFI) rather than each individual activity.

The balance sheet shows both *assets* and *claims to assets*. The *claims to assets* includes *liabilities* (the creditors’ claims) and *net worth* (the proprietary interest in the NAFI). Every asset must be *balanced* by a claim.

Assets

The *assets* category typically includes *current assets*, *investments*, and *property and equipment*.

Current assets consist of cash and assets that are convertible to cash or will be used in operations within 12 months of the balance sheet date. Current assets are usually listed in order of liquidity, with cash, the most liquid, first. Prepaid expenses, the least liquid, are usually listed last in this category.

Investments are long-term in nature, and are not expected to be converted into cash within 12 months.

Property and equipment consists of *fixed assets*, such as land, buildings and furniture.

Liabilities

Liabilities consist of *current* and *long-term* obligations. Just as current assets are convertible to cash within 12 months, current liabilities are those which must be paid within 12 months. In the

next chapter, *Financial Statement Analysis*, we will discuss the *current ratio* and other ratios using these numbers.

Long-term obligations are those which are not due within 12 months. An example might be the payments on a loan that are not due until the subsequent year.

Net Worth

Net Worth reflects the proprietary interest in the NAFI, which is the excess value of assets over liabilities.

Book Value versus Market Value

Generally-accepted accounting principles (GAAP) require that assets are kept on the books at the lower of cost or market. In other words, if an asset cost \$10,000 but could reasonably be sold for \$15,000, it would be “booked” (listed on the balance sheet) at \$10,000. Only when and if the asset were sold would the higher value appear...although the change in value should be disclosed in a footnote to the financial statements.

On the other hand, what if that \$10,000 asset could now only be sold for \$5,000 (think of a computer that has become obsolete)? GAAP will tell you to “book it” at the lower price.

In the case of a fixed asset which is subject to depreciation, the book value equals the cost less the accumulated depreciation. (*Depreciation* is a method for allocating the cost of expensive fixed assets over their useful life. For example, if you bought a delivery van for \$40,000, you would not list the entire purchase price as an expense in the year that you bought it. To do so would show an unrealistic loss on your income statement. However, if the van will be used for ten years, it would be realistic to allocate \$4,000 to the income statement expenses annually.)

The Income Statement

The income statement reflects the results of financial operations over a period of time, such as a month or a year. (It is often referred to as the “P&L” or “Profit & Loss Statement.”) If the balance sheet is a snapshot, the income statement is a movie...showing what has happened with the activity during the time covered by the statement.

The income statement compares *revenues* (income) with the expenses used to generate the revenues. If expenses are less than the revenues, there is a *net income* or *net profit*. If the expenses are greater than the revenues, there is a *net loss*.

Revenues include all of the ways that an activity generates income: membership dues, sales of goods and services, and/or fees for various activities. On the income statement, these revenues will be broken down into enough detail to aid in understanding the results. For example, a club income statement might include dues, food sales, beverage sales, catering, Bingo, and other categories, depending on the scope of the operation.

Expenses include all of the costs associated with generating the revenues. In the case of the club mentioned above, that would include Cost of Goods Sold for both food and beverage operations, labor, administrative costs, and direct expenses.

The Statement of Cash Flow

The *statement of cash flow*, mandated in 1987 by the Financial Accounting Standards Board (FASB), reflects the sources and uses of cash for a period of time. The statement of cash flow is designed to help users assess four important factors: (1) the ability to generate future cash flows, (2) the operation's ability to meet its financial obligations, (3) the reasons for difference between net income and cash flows, and (4) the cash and non-cash aspects of the operations for the accounting period.

A statement of cash flow is divided into three major sections reflecting cash receipts and disbursements by: (1) investing activities, (2) financing activities, and (3) operating activities.

Income Flows versus Cash Flows

Some managers fail to understand the difference between income flows and cash flows. Income includes all of the revenues actually generated during an accounting period, whereas cash is limited to actual money in the bank.

For example, suppose that you had a huge Open House at the Fitness Center on the last day of the accounting period. One of the activities during the Open House was the sale of used fitness equipment. One member bought an old rowing machine for \$100, paying cash. Another bought some weights for \$50, which she put on a credit card.

The cash is considered received and available the day that you take it in. But the credit card payment may be delayed a day or more while the processor handles the paperwork. Your income for the day includes the \$150 from both sales. But your cash flow for the day is only \$100.

You can't spend that \$50 credit sale until the transaction is converted to cash.

If your activity provides credit to its customers, perhaps billing them at the end of each month, you would recognize all of the sales on your income statement. But the amounts only show up on the statement of cash flow when the cash has actually been received. If you have a large volume of credit sales, this can create a real cash flow problem.

This difference between the two statements is a result of *accrual* accounting, in which income and expenses are included on the income statement when they are *earned*, without regard to when the money is actually received.

In the civilian sector, there are many examples of businesses which went bankrupt while waiting for the cash to come in from sales.

Relationship Among the Financial Statements

The *Balance Sheet* is a static statement, reflecting the activity's financial position at a *point* in time. This best represents the overall health or strength of an activity. The other three statements are all *flow* statements, reflecting the operations over a *period* of time.

The *Income Statement* reflects the financial performance of an activity, resulting in a net income, loss, or break-even for the accounting period.

The *Statement of Cash Flow* reflects actual cash receipts and disbursements during the

accounting period.

Analysis

Without analysis, a *financial statement* is just a page full of numbers. But with a detailed understanding of what the numbers represent, those numbers can tell compelling and important stories about your operation. Three approaches to analysis will be presented: (1) horizontal analysis, (2) vertical analysis, and (3) ratio analysis.

Horizontal Analysis

Horizontal analysis compares two (or more) financial statements such as balance sheets or income statements. Typically, the current statement is compared to the statement of the preceding period, or the same period of the previous year. Horizontal analysis could also be done with a pro forma (projected) statement, or an older historical statement. The statements being analyzed are often called *comparative statements*.

Comparative statements show the changes from the earlier period to the current period in both absolute (dollar) and relative (percentage) amounts. The percentage change is computed by dividing the dollar change by the dollar amount from the earlier period.

What should you look for in horizontal analysis? Significant changes! If figures show a drastic change between periods, there must be a reason. Significant changes should be investigated. Changes could be caused by inventory or accounting errors, by operational failures or successes, changes in the marketplace, or by employee theft or malfeasance. Horizontal analysis does not provide answers per se, but it does point out areas of interest that the manager should investigate. Changes are not “good” or “bad” until they are viewed in light of the operating environment. One of the most important benefits of comparative analysis is the identification of trends.

Vertical Analysis

A second approach to analyzing financial statements is vertical analysis, in which the key figures are reduced to percentages. This results in *common-size financial statements*. In other words, the financial condition or operations of a small, on-base auto repair shop could be compared to that of a large national chain. Percentages for expenses are computed by dividing the expense by total net revenue. Thus, the sum of the expense percentages is less than 100% for a profitable operation.

For example, if labor costs were \$10,000 and total net revenue is \$32,000, then labor costs are 31% of sales. $\$10,000/\$32,000 = .3125$, rounded off to 31%

Common-size balance sheets permit a comparison of amounts relative to a base within each period. For example, there might be significantly more cash in the bank in the current period...but that amount might be the same *percentage* as the previous period. As with horizontal analysis, vertical analysis doesn't provide answers...but it does provide another useful tool for management analysis.

When comparing different scale activities, it is vital to keep in mind qualifications relevant to each activity.

Ratio Analysis

A third major approach to analyzing financial statements is the use of ratio analysis. In essence, common-size financial statements are sets of ratios. However, ratio analysis can go far beyond a single financial statement.

By themselves, ratios simply express numerical relationships between figures. In order to use ratios as indicators or measurements of the success or well-being of an MWR/Services activity, the computed ratios must be compared against some standard.

There are basically three different standards used to evaluate the ratios computed for a given operation for a given period:

1. Prior Period Calculations

Ratios can be compared to corresponding calculations from the prior period or from the same period of the previous year to discover any significant increases or decreases.

2. Industry standards

Ratios are compared to similar operations in their industry segment, or other MWR/Services activities, providing a useful benchmark for operations.

3. Planned Ratio Goals

Perhaps the most effective use of ratio analysis is to create ratio goals for your operation, and then compare actual results with the goals. Some goals will probably be set by your supervisor, or higher headquarters, but there's nothing to stop you from setting your own specific goals as well.

Obviously, the effectiveness of ratio analysis will depend upon the manager's understanding of the standards being used. For example, your labor cost percentage (an operating ratio) might be 35%. Perhaps the prior period was 36%, and the industry standard was 38%. Time for a proud smile?

Now consider that your boss assigned a planned ratio goal of a 34% labor cost percentage. (There are many possible explanations for this. It might be that your repair and maintenance costs are higher than the industry standard, necessitating a lower labor cost percentage.) Even though you have improved from the previous year, and are doing better than the industry standard, you have not met your goal.

Remember: ratios are used to communicate financial results.

Classes of Ratios

Ratios are normally classified by the type of information they provide. Here are five common ratio groupings:

1. Liquidity Ratios

Liquidity ratios reveal the ability of an operation to meet its short-term obligations, that is, the ability to pay bills when they come due.

Three of the most used liquidity ratios are the Current Ratio, Acid Test Ratio, and Accounts

Receivable Turnover Ratio.

Current Ratio – The most common of the liquidity ratios, the current ratio is the ratio of total current assets to total current liabilities, and is expressed as a coverage of so many times.

$$\text{Current Ratio} = \text{Current Assets} / \text{Current Liabilities}$$

For example, if current assets are \$115,000 and current liabilities are \$55,000, the current ratio is 2.09 to 1.

$$\$115,000 / \$55,000 = 2.0909 \text{ (rounded off to 2.09)}$$

Generally, a current ratio of 2 to 1 (twice as many current assets as current liabilities) is considered acceptable, although your Service headquarters may specify a different standard.

Acid Test Ratio – A more stringent test of liquidity, the acid test ratio is the ratio of “quick assets” to current liabilities. Specifically, inventories and prepaid expenses are excluded from current assets. Many businesses look for an acid test ratio of at least 1 to 1.

$$\text{Acid Test Ratio} = \text{Cash, Marketable Securities \& Accounts Receivable} / \text{Current Liabilities}$$

For example, if the total of cash, marketable securities & accounts is \$60,000 and current liabilities are \$55,000, the acid test ratio is 1.09 to 1.

$$\$60,000 / \$55,000 = 1.0909 \text{ (rounded off to 1.09)}$$

Accounts Receivable Turnover Ratio – The accounts receivable turnover measures the conversion of accounts receivable to cash. Calculate the ratio by dividing revenue by average accounts receivable. The faster the accounts receivable are turned over, the more credibility the current and acid test ratios have in financial analysis.

$$\text{Accounts Receivable Turnover} = \text{Total Revenue} / \text{Average Accounts Receivable}$$

For example, if total revenue is \$95,000 and average accounts receivable is \$20,000, then the accounts receivable turnover ratio is 4.75.

$$\$95,000 / \$20,000 = 4.75$$

2. Solvency Ratios

Solvency ratios measure the extent to which the operation has been financed by debt, and its ability to meet its long-term obligations. High solvency ratios indicate ability to weather financial storms.

Debt-Equity Ratio – The debt-equity ratio, one of the most common solvency ratios, compares total debt to its net worth (owners’ equity).

$$\text{Debt-Equity Ratio} = \text{Total Liabilities} / \text{Total Owners' Equity}$$

Long-Term Debt to Total Capitalization Ratio – This ratio is similar to the debt-equity ratio, except that current liabilities are excluded from the numerator and long-term debt is added to the denominator.

$$\text{Long-Term Debt to Total Capitalization Ratio} = \text{Long-Term Debt} / \text{Long-Term Debt and Owners' Equity}$$

Operating Cash Flows to Total Liabilities Ratio – This solvency ratio compares cash flow from operations to average total liabilities. The goal is for this ratio to be relatively high, given an optimal debt load.

Operating Cash Flows to Total Liabilities Ratio = Cash Flow from Operations/Average Total Liabilities

3. Activity Ratios

Activity ratios reflect management's effectiveness in using its resources.

Inventory Turnover Ratio – This ratio shows how quickly the inventory is moving. (Generally, the quicker the better.) In a food service operation, food and beverage inventory are typically calculated separately.

Inventory Turnover Ratio = Cost of Inventory/Average Inventory

For example, if the cost of inventory for a period is \$50,000 and the average inventory for the period is \$20,000, then the inventory turns over two and a half times.

$$\$50,000/\$20,000 = 2.5$$

Inventory is expensive to maintain. Costs include storage space (including utilities), insurance, personnel expense, recordkeeping, and the opportunity cost of funds tied up in inventory. Also, inventory may be perishable and/or susceptible to theft.

Fixed Asset Turnover Ratio – This ratio measures management effectiveness in using fixed assets.

Fixed Asset Turnover Ratio = Total Revenue/Average Fixed Assets

The fixed asset turnover ratio tells how long it takes for the revenue of your operation to cover the investment in fixed assets. A high turnover suggests an effective use of assets; a low turnover suggests an inefficient use of assets. To correct a low turnover ratio, consider divesting yourself of some of the assets...or finding ways to increase revenue...or both.

Paid Occupancy Percentage Ratio – This ratio is a key indicator for hotels and other lodging operations, and refers to the percentage of rooms sold in relation to the number of rooms available.

Annual Paid Occupancy Percentage = Paid Rooms Occupied/Available Rooms

4. Profitability Ratios

Profitability ratios show management's overall effectiveness as measured by returns on sales and assets. All the information conveyed by liquidity, solvency, and activity ratios affects the profitability of the operation.

Profit Margin – Profit margin is a key indicator of management's ability to generate profits (net income) on sales (and other revenue) by generating sales and controlling expenses.

Profit Margin = Net Income/Total Revenue

For example, if net income for the period is \$8,000 and the total revenue for the same period is

\$220,000, the profit margin is 3.6%.

$\$8,999/\$220,000 = .0363636$ (rounded off to 3.6%)

Operating Efficiency Ratio – Operating efficiency is a better measurement of management's performance than the profit margin, because it only considers those expenses over which management has control.

Operating Efficiency Ratio = Income Before Fixed Charges/Total Revenue

Income before fixed charges is total revenue less expenses generally controllable by management. The remaining fixed charges are expenses relating to the capacity of the operation, including insurance, depreciation, and interest expense.

Return on Assets Ratio – This ratio is a general indicator of the profitability of the enterprise's assets. Unlike the previous two profitability ratios, return on assets compares bottom line profits to the total investment (total assets).

Return on Assets Ratio = Net Income/Average Total Assets

5. Operating Ratios

Operating ratios assist management in analyzing the operations of the establishment/activity. There are literally hundreds of operating ratios that can be calculated, generally falling into two categories: (1) Revenue Ratios and (2) Expense Ratios.

Here are three frequently-used revenue ratios:

Mix of Sales – Most operations do not make the same percent profit on every activity. For example, catering may be more profitable than the formal dining room, or craft lessons may be more profitable than the sale of craft supplies. It is vital, therefore, to know what the activity's *sales mix* is, and how it changes over time.

To determine the sales mix, departmental revenues are totaled and percentages of the total revenue are calculated for each operated department by dividing the department revenue by total revenue.

Average Room Rate -In a hotel or other lodging operation, the average room rate (also called average daily rate, or ADR) is a critical ratio for budgeting and evaluation of operating results. It is easy to calculate:

Average Room Rate = Rooms Revenue/Number of Rooms Sold

For example, if the total rooms revenue for the period is \$80,000 and the number of rooms sold during that period is 1200, then the average room rate achieved is \$66.67.

$\$80,000/1200 = \$66.66666...$ (rounded to \$66.67)

Average Food Service Check – For food operations, the average food service check is an important management indicator and budgeting tool. It is easily calculated by dividing the total food revenue by the number of food covers. (A *cover* is a table setting for one customer.)

Average Food Service Check = Total Food Revenue/Number of Food Covers

For example, if the total food revenue is \$40,000 and the number of food covers is 2,800, then the average food service check is \$14.29.

$$\$40,000/2800 = \$14.285714 \text{ (rounded to } \$14.29)$$

And here are two frequently-used expense ratios:

Food Cost Percentage – This key ratio compares the cost of food sold to food sales, and is one of the most frequently used “quick checks” by food service managers.

Food Cost Percentage = Cost of Food Sold/Food Sales

For example, if cost of food sold is \$18,000 and food sales for the same period are \$40,000, then the food cost percentage for that period is 45%.

$$\$18,000/\$40,000 = .45$$

Labor Cost Percentage – The largest expense in many operations is the cost of labor, so this ratio becomes a critical management indicator. Make sure that you know whether your service sets standards based on raw labor cost, or entire labor cost; including benefits.

Labor Cost Percentage = Total Labor Costs/Total Revenues

For example, if total labor costs are \$30,000 and total revenues are \$75,000, then the labor cost is 40% of sales.

$$\$30,000/\$75,000 = .40$$

In the case of labor, it is often necessary to calculate separate ratios for each department, since some departments may be more cost-effective than others.

In fact, *any* expense can be analyzed by dividing it by appropriate revenues.

Summary of Chapter 6

Financial statements are used to communicate financial information at several levels. To be an effective manager, you need to be able to read and understand all four of them for your activity. Read *life* into those financial statements! By using various financial analysis tools, you can improve your operation and your effectiveness.

There are four primary types of financial statements for an activity: (1) Balance Sheet, (2) Income Statement, (3) Statement of Cash Flow, and (4) Statement of Retained Earnings.

The Balance Sheet reflects the financial position of an activity at a point in time. Assets equal liabilities plus net worth.

The Income Statement reflects the results of financial operations over a period of time. It compares revenues with the expenses used to generate that revenue.

The Statement of Cash Flow reflects the sources and uses of cash for a period of time.

The Statement of Retained Earnings simply shows the retention of earnings during a period.

Without financial analysis, financial statements are just pages full of numbers. It is very important when you are interpreting financial statements to know what it is that you are

comparing. Often times it is better to compare the percentages rather than the dollar amount for one can get a better understanding of the financials through the changes in percentages rather than the changes in dollar amounts. There are two different types of financial analysis and they are Horizontal Analysis and Vertical Analysis.

Horizontal analysis compares two or more statements from different periods, called comparative statements.

Vertical analysis reduces key figures to percentages, resulting in common-size financial statements.

Ratio analysis uses numerical relationships between figures to help managers analyze their operations. There are three different standards used to evaluate ratios: (1) prior period calculations, (2) industry standards, and (3) planned ratio goals.

Five common classes of ratios are: (1) liquidity, (2) solvency, (3) activity, (4) profitability, and (5) operating ratios.

