



# UNIT-3

## Tools For Financial Analysis

### Learning Outcomes

**By the end of this unit the learner will be able to:**

- ✓ Identify and analyze important financial data and make financial decisions
- ✓ Read annual reports
- ✓ Determine whether a company is financially high or low risk



## Analyzing the Data

### Useful Ratios

Once you have the basic data in place, it's time to analyze it. Ratio analysis can get very complicated, but we'd like to provide a few basic ratios for you to get started with. The ratios that we discuss here will give you some key measurements for analyzing a company's health. Ratios also enable you to compare one company against industry standards.

### Current Ratio

This is possibly the most common ratio used in the business world. It's usually presented like any other ratio, with two numbers separated by a colon. This ratio compares assets to liabilities – in other words, what the company owns vs. what it owes. This can give you a quick picture of the health of a company. Anything above 2:1 is considered acceptable.

The formula for current ratio is:

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

So if we used the numbers from our sample balance sheet in Session Four:

$$\frac{11,500}{4,500}$$

We could calculate that Acme Widgets Inc. has a current ratio of about 2.6:1.

### Quick Ratio

This ratio is very similar to Current Ratio, except that it removes inventory from the calculation of assets, on the assumption that inventory is harder to liquidate than other assets. Anything above 1.5:1 is considered acceptable.

The formula for the quick ratio is:

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

### Net and Gross Profit Margin

These two ratios measure the amount of money that the business earns as a percentage of overall revenue.

Gross profit margin takes into account only the cost of making the product or service. Therefore, its equation looks like this:

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

The net profit margin shows what the business has earned after selling its products and paying all expenses – the true bottom line. Its equation is:

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

The results of both equations are expressed as a percentage.

### Caution!

Some words of caution when using ratios:

- Take the time to look up industry averages on the Internet. This will give you a good benchmark to start from.
- If you are comparing two companies, be sure that they are in the same industry.
- Ratios are best used to compare small companies or fairly independent divisions of large companies.
- Watch out for distorting factors, like unexpected disasters in the company or large windfalls. If you are unsure, calculate ratios using figures from several different intervals and compare them.
- Never depend on ratios alone! Gather all the information you can about the company and use ratios as one piece of the puzzle.

## Reading Annual Reports

An annual report typically summarizes the company's fiscal year. Unlike a financial statement, where the format is typically laid out by a governing agency, financial and annual reports can appear in many forms. They are often padded and groomed to give the best impression of the company possible. This isn't to say that they don't contain good information – you just have to look a little harder.

A typical annual report contains the following sections:

- Letter from the CEO
- Highlights of the past year
- Goals and plans for the next year
- Financial statements (balance sheet, income statement, cash flow statement, and statement of shareholder's equity)
- Footnotes
- Summary of corporate information
- Analysis and conclusions
- Report by independent auditors

### Getting Ready

Ignore fluffy pictures, fancy signatures, and glossy paper. Anyone can pay to have an annual report published in a sexy format.

### Step One: Report by Independent Auditors

Read the report by the auditors, typically located at the back of the report. Typically this should affirm that the statements were audited in accordance with all laws and according to generally accepted accounting principles and that the financial statements fairly present the results. Statements like, “as reported by” can mean that some information is dependent on individual statements rather than hard facts.

If the report by auditors emphasizes particular items in the report, that is usually a red flag. Make sure you investigate these items thoroughly.

### Step Two: Footnotes

The footnotes provide explanation and context to the financial statements. Things to look for:

- An excessive amount of footnotes, or footnotes that are excessively confusing. Is the company trying to hide something?
- Changes in accounting, depreciation, and/or inventory methods that do not seem justified.
- A “big hit” or “big bath” means taking three years’ worth of losses in one quarter. You’ll often see this happen when a new CEO takes over because he wants to start with a clean slate. By taking a big bath it may be possible to turn out good results later.
- Equalization or expense deferral, to conceal or create big gains.
- “Taking a percentage of completion” means reporting part of a long-term contract even if no money has been received. This will help spread the profits from the contract over a longer period of time and reduce the tax impact.

### Step Three: Financial Statements

The real meat of the report is the financial statements: balance sheet, income statement, cash flow statement, and statement of shareholder’s equity. Each report should have last year’s figures and some comparative numbers for prior years so that users can see the change. If past history isn’t included, ask for it (or at least an explanation of why it isn’t there).

Note that typically these statements differ from the ones sent to tax agencies. If the company is publicly traded, the financial statements submitted for tax purposes should be publicly available. The financial statements for private companies are not widely available.

Here are some other tips for looking at the various financial statements in an annual report.

#### Balance Sheet

- Look for trends and major changes over the past few years.
- Calculate the current ratio if appropriate.
- Compare asset values to similar companies.
- Watch for an increase in long-term debt. This could signal trouble.

- If most of the assets are made up of profits from previous years, then the bottom line might not be as good as it first appears.

### Income Statement

- Here you can see whether the company made a profit or a loss.
- Calculate the gross and net profit margins and compare to industry averages. Has it changed from prior years? Is it better or worse?
- Obviously, we want the bottom line to be positive and we want it to grow each year.

### Cash Flow Statement

- Review what investments have been made. Are they making investments to keep necessary equipment up to date? Are they wise investments?
- Check the Financing section. Is the company borrowing more money or is it repaying debt?

### Statement of Shareholder's Equity

- Review the history of this statement.

### Step Four: Letters and Analysis

Next look at the CEO's letter. To help you get to the bottom of it, use the 5 W's and the H of good reporting:

- **Where** has the company been and where is it going?
- **What** are the overall goals of the company?
- **When** and **how** is it going to achieve its goals?
- **Why** is the CEO taking the direction that they have chosen?
- **Who** will lead the company's efforts?

Watch out for:

- A lot of words that mean nothing. This could just mean that the letter is poorly written or it could mean that the CEO has something to hide.
- A message that is different from the rest of the report.
- Weak words like "working towards" or "except."
- Apologies and excuses.

In the other prose areas (summary, conclusion, highlights, etc.) check for:

- Legal disputes
- Qualifications of board of directors, top management, and auditors
- Excessive sale of stock

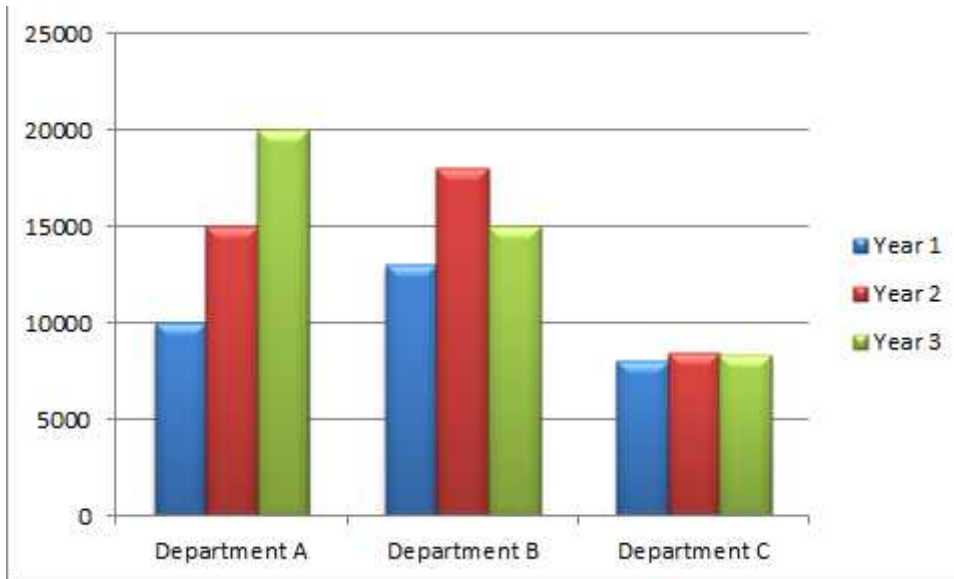
## Using Charts and Graphs

If you're having difficulty wrapping your head around a pile of numbers and figures, try creating a chart or graph. Some common types of charts are described below.

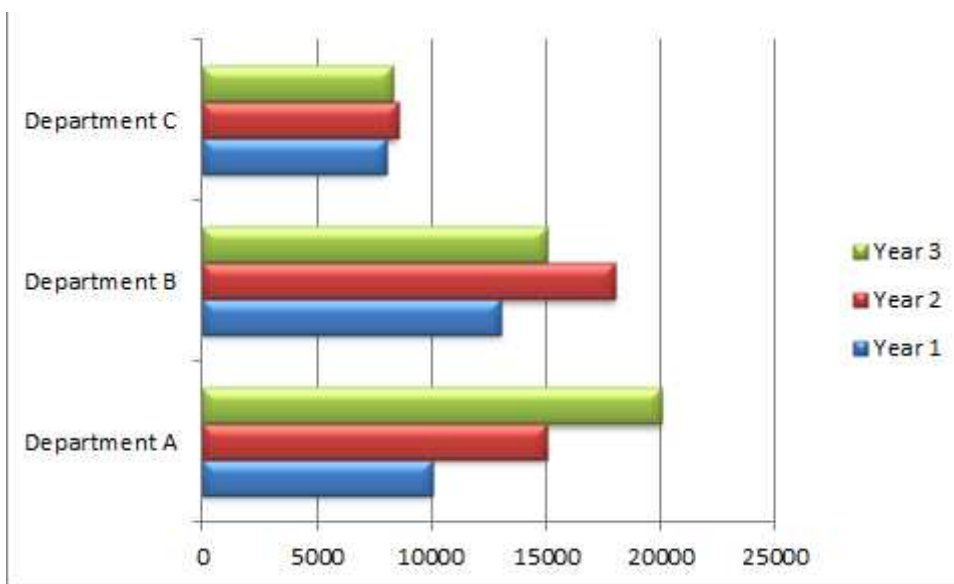
### Column and Bar Charts

- Good for displaying several types of items.
- Example: Profits by different departments.

Here is an example of a column chart:

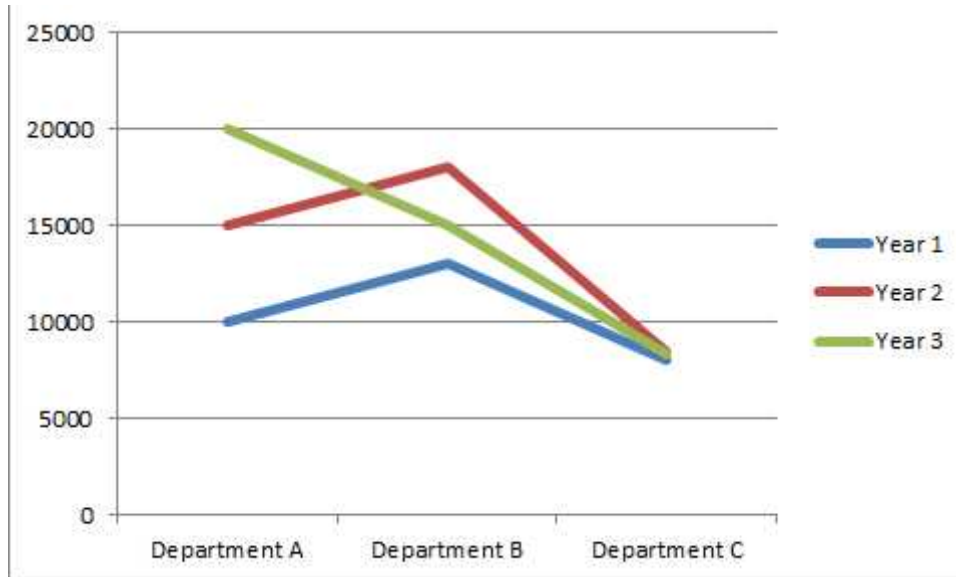


Here is the same data shown as a **bar chart**:



## Line Charts

- Good for displaying trends.
- Example: Profits from different departments over several years.



## Pie Charts

- Good for showing how a particular value is made up.
- Example: Showing the breakdown of the overall company's profit.



When creating charts, make sure to choose the appropriate chart type. We recommend staying away from 3D charts as they can sometimes skew the data. Keep your formatting simple so that your audience focuses on the message.

## Using Ratios for Decision Making

### Break-Even Point

Identifying the break-even point for a particular project is a good way to evaluate whether or not a new idea has the ability to make money. The formula is:

$$\text{Break Even Point} = \text{Fixed Costs} + \text{Variable Costs}$$

Fixed costs are those that remain the same regardless of the level of production, like rent or office equipment. Variable costs encompass the materials and labor required for the product. These items are used more or less depending on how much product is produced.

Let's say that you want to make a new kind of gadget. The fixed cost for each gadget will be \$50. The variable costs will be \$5.56 for each gadget. The break-even sales point, therefore, is \$55.56. Selling your product for any less than this would result in a loss.

### Cost-Benefit Analysis

Another type of analysis that can be as simple or complex as required is cost-benefit analysis. This allows you to compare what an opportunity will cost versus the expected payoff.

Let's say that you're trying to decide between two robots to help you make widgets.

	<b>Robbie the Robot</b>	<b>Rachel the Robot</b>
Widgets Produced Per Hour	75	60
Value of Widgets Produced Per Hour (\$5 sale price each)	$75 \times 5 = 375$	$60 \times 5 = 300$
Cost of Units Produced	$75 \times 1.5 = 112.50$	$60 \times .25 = 15$
<b>Total Value – Total Cost = Estimated Benefit</b>	$375 - 112.50 = \mathbf{262.50}$	$300 - 15 = \mathbf{285.00}$

Initially, Robbie seems like the better choice if we just look at how many widgets produced per hour. However, Rachel has an overall better benefit, and therefore seems to be the better buy.

### Return on Investment

This calculation enables you to see what a particular investment has returned, giving you a percentage that easily allows you to see how this investment has performed. The basic equation is:

$$\frac{\text{Payback} - \text{Investment}}{\text{Investment}}$$

The result is then expressed as a percentage, which gives you the return on investment.

Let's say that you put \$100 into a savings account. Over a period of 20 years, you got \$10 back in interest.

$$\frac{110 - 100}{100}$$

Your return on investment, then, is 10%. Please note that when performing this calculation in the real world, there can be many other factors affecting it and therefore complicating it. This is only the basic formula.

### **A Final Word**

As a supervisor, you get paid to make profit happen. Since you are expected to control costs and improve profits, you have to be relentless in your search for better ways to do things. Competition is fierce and you can't take profit for granted. Nor can you decide you don't need profits. Profits are an absolutely essential part of doing business, unless you work in a non-profit industry. Even then, you must work toward a break-even rather than a loss.

Will cutting prices and spending more dollars on advertising increase your profit? Remember that profit is a two-headed beast: it comes from making sales or providing service and controlling costs.

## **Identifying High and Low Risk Companies**

### **General Guidelines**

#### **Low-Risk Corporations**

Low-risk corporations typically offer low shareholder returns but have lots of equity. This makes the company more secure and less likely to fail. Its assets exceed its liabilities by a large margin. Banks, insurance companies, and well-established brand names often fall in this category.

Financial numbers for a low-risk corporation usually look like this:

- 70-30 split between current and fixed assets
- 25% or less of liabilities are current
- 15% or less of debt is long-term
- Shareholder's equity is around 50-60%

#### **High-Risk Corporations**

These are the companies that take bigger risks, or are in riskier business segments, and (sometimes) can make the big gains under the right circumstances. These companies can offer investors the allure of high returns but you must remember that they therefore have higher risk. Their funding typically comes from

outside the business and therefore they have little equity but higher debt. You may see fast growth but you will also likely see a big fluctuation in earnings.

Financial numbers for a high-risk corporation usually look like this:

- 30-70 split between current and fixed assets
- 25% or more of liabilities are current
- 45% or more of debt is long-term
- Shareholder's equity is around 35%

**Note**

Remember: Current assets are generally considered to be anything that can be converted into cash within one year. Fixed assets are more permanent assets, such as vehicles, equipment, machinery, land, and buildings.