
CE-Oh!
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Warm-up Activity

How do you monitor the financial health of your household?

Do you know here you spend your money and why you spend it?

Do you have a budget for every dollar you earn?

Do you pay close attention to your bank statements, or do you pretty much go by what's provided as your current account balance?

Vocabulary

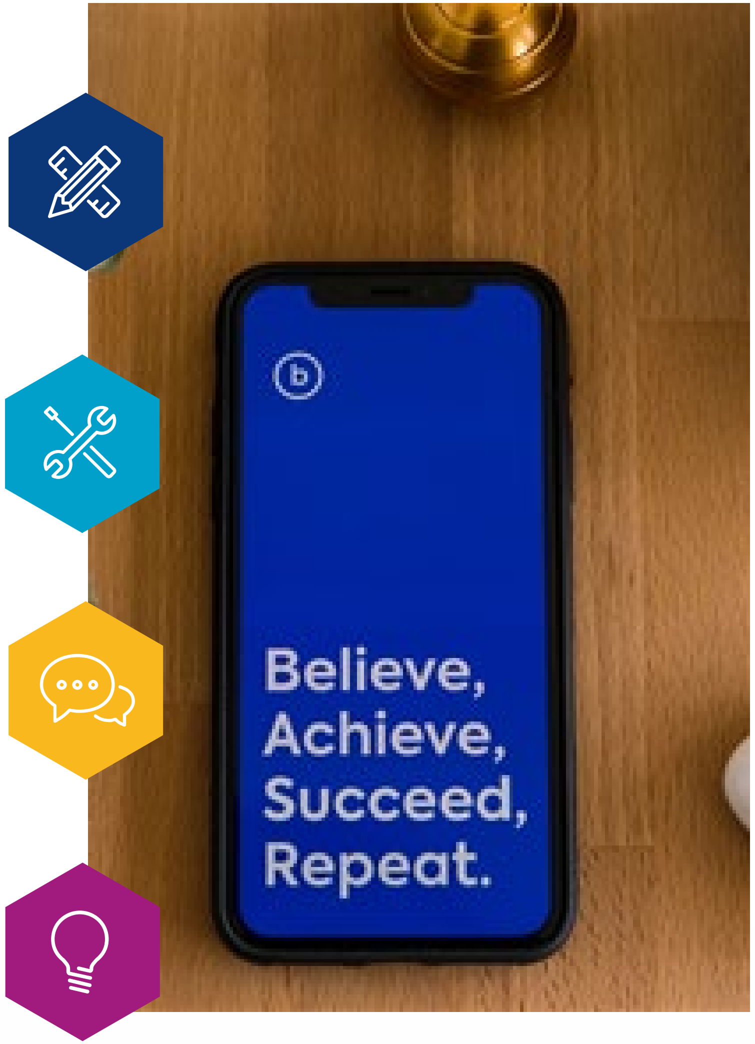
Here is the vocabulary for this module.

accounts payable
accounts receivable
asset
cash flow statement
cost of goods sold (cogs)
current assets
current liabilities
current ratio
debt ratio
debt-to-equity ratio
expenses
financial ratios
gross profit
liabilities
liquidity
long-term assets
marketable security
operating ratio
owner's equity
pre-tax profit
quick ratio
return on sales
revenue

Key Learning Objectives

Now we will learn what goes into financing a business and analyzing those financials. Our objectives for this module are:

- Describe how to utilize income statements (profit and loss statements) and analyze an example income statement through a ratio calculation
- Build a balance sheet using example data
- Identify multiple financial statements
- Calculate a financial ratio from an example balance sheet



Income Statements

Income statements show how much income you are getting from your business and are a good indicator of how well it is doing if you know how to analyze it using **financial ratios**.

Sales-Data Analysis

When you see how much money your business has brought in, you can use that information to determine what you can buy, how many people you can hire, and in general what you can afford in the immediate sense.

If you collect your income statements across a long period of time and graph your data, you will start to see patterns or "trends" in the data and you can use this information to determine how your business might fare in the future.

Same-Size Analysis

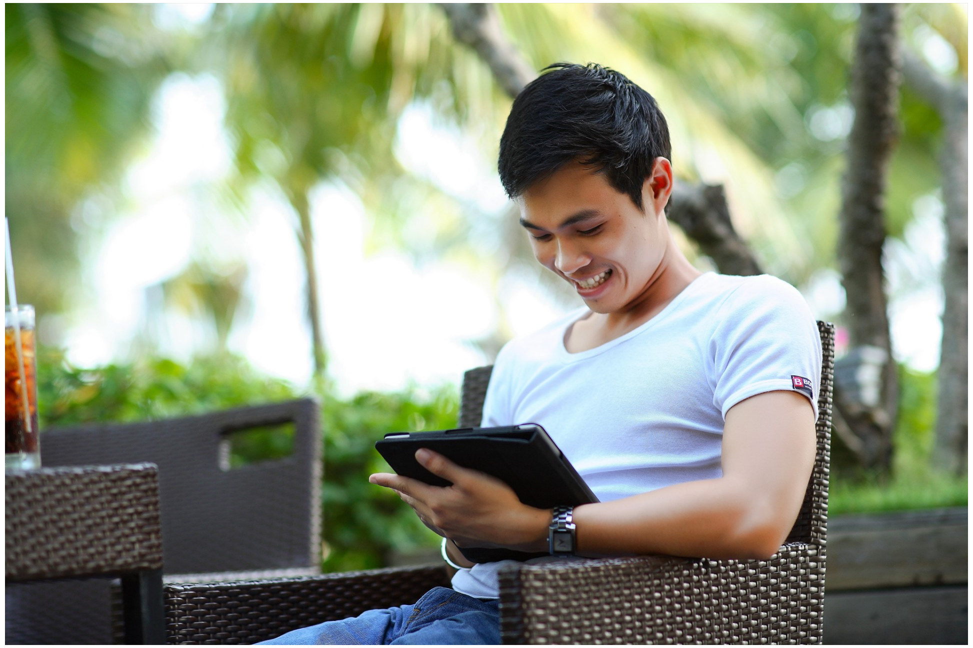
Revenue is how much money your company makes before you have to account for any expenses or other costs the company had.

Expenses are the money you use to run the company.

Cost of Goods Sold is how much money spent acquiring the goods your business sells.

Gross profit is revenue minus COGS

The **pre-tax profit** is your gross profit minus your expenses



Same-Size Analysis

Income Statement	Amount (in dollars)	Calculation	% of Sales
Revenue from sales	$15,000	($15,000÷$15,000) x 100	100%
COGS	$7,000	($7,000÷$15,000) x 100	47%
Gross Profit	$8,000	($8,000÷$15,000) x 100	53%
Expenses	$3,700	($3,700÷$15,000) x 100	25%
Pre-Tax Profit	$4,300	($4,300÷$15,000) x 100	29%

Same-Size Analysis Continued

With the ability to understand these numbers you will be able to optimize your business and see trends across multiple weeks, months, or years that go deeper than just determining revenue for that month.

Using this information, you can make changes to your business plan.

Income Statement Ratios

We use two types of financial ratios, the operating ratio and the return on sales (ROS).

The Operating Ratio

The **operating ratio** shows you how much of your revenue you're spending, per dollar, to cover your expenses.

(Expenses/Revenue) x 100 =
Operating Ratio (%)

The Operating Ratio

The **return on sales (ROS)** is a ratio that shows you how much of your revenue you're actually receiving as profit once COGS and expenses are taken out.

Net Profit/Revenue) x 100 = Return on Sales (%)

Balance Sheet

Assets

Anything that is worth money is an **asset** that your business owns

Convertible Notes

Debts that you still owe are **liabilities**

Owner's Equity

Owner's Equity is the difference between these two numbers

Assets and Liabilities

Anything that can be quickly sold and converted into cash are **current assets**

Money that is owed to your business is **accounts receivable**

Long-term assets take more than a year to sell

Debts that must be paid in the next year are **current liabilities**

Anything that has to be paid is considered **accounts payable**

Anything that will take more than a year to pay off are **long-term liabilities**

Assets – Liabilities = Owner's Equity

Preparing Balance Sheets

ASSETS		
Current Assets		
Cash	43,000	
Inventory	250,900	
Accounts Receivable	12,000	
Total Current Assets		$305,900
Long-term Assets		
Equipment	52,100	
Total Long-term Assets		$52,100
Total Assets		**$358,000**

LIABILITIES		
Current Liabilities		
Bank Loans	75,800	
Accounts Payable	13,000	
Sales Tax Payable	7,000	
Total Current Liabilities		$95,800
Long-term Liabilities		
Company Car	18,200	
Total Long-term Liabilities		$18,200
Total Liabilities		**$114,000**

OWNER'S EQUITY		
Owner's Equity		
Your Name, Capital		244,000
Total Liabilities and Owner's Equity		**$358,000**

Preparing Balance Sheets

Old Amount - New Amount = Difference

(Difference / Old Amount) x 100 = Change (%)

ASSETS	2014 ($)		2019 ($)		% change
Current Assets					
Cash	43,000		38,000		-12%
Inventory	250,900		300,000		+20%
Accounts Receivable	12,000		15,000		+25%
Total Current Assets		$305,900		$353,000	+15%
Long-term Assets					
Equipment	52,100		85,000		+63%
Total Long-term Assets		$52,100		85,000	+63%
Total Assets		**$358,000**		**$438,000**	**+22%**
LIABILITIES					
Current Liabilities					
Bank Loans	75,800		70,000		-8%
Accounts Payable	13,000		5,000		-60%
Sales Tax Payable	7,000		9,000		+29%
Total Current Liabilities		$95,800		$84,000	-12%
Long-term Liabilities					
Company Car	18,200		0		-100%
Total Long-term Liabilities		$18,200		0	-100%
Total Liabilities		**$114,000**		**$84,000**	**-26%**
OWNER'S EQUITY					
Owner's Equity					
Your Name, Capital		244,000		354,000	+45%
Total Liabilities and Owner's Equity		**$358,000**		**438,000**	**+22%**

Income Statements Continued

The **debt ratio** is a business's total debt (liabilities) divided by its total assets.

A similar ratio is a **debt-to-equity ratio**

(Total Liabilities / Total Assets) x 100 = Debt Ratio (%)

(Total Liabilities / Owner's Equity) x 100 = Debt-to-Equity Ratio (%)

Quick Ratio and Current Ratio

- **Liquidity** is the ability to quickly turn assets into money
- A **marketable security** is an investment that can be turned into money quickly
- **Quick ratios** include cash and cash equivalents, marketable securities, and accounts receivable
- **Current ratios** include all of your current assets

Cash Flow Statements

The **cash flow statement** provides aggregate data regarding all cash inflows a company receives from its ongoing operations and external investment sources

Knowledge Check

Match the term with the correct definition:

An investment (such as a stock or bond) that can be turned into money quickly

Debts that take longer than a year to pay off; this can include the mortgage on a business building

Expenses divided by revenue, multiplied by 100; how much revenue is being spent, per dollar, to cover expenses

Current assets divided by current liabilities; determines how many times over you can pay your debt and includes cash and cash equivalents, marketable securities, accounts receivable, inventory, and prepaid expenses

Terms:

Current ratio

Long-term liabilities

Marketable security

Operating ratio (%)

Multiple Response Question

Describe how to utilize income statements. Select the best answers below.

- [ ] Ensures the company is on track with their spending by aligning with the budget line items
- [ ] Show if the company is generating a profit or loss for a specified period
- [ ] Show how much income you are getting from your business
- [ ] Use it to calculate the cost of goods sold

Multiple Response Question

Use a calculator and the income statement below to find the Operating Ratio Percentage for this business using the following formula:

Operating ratio = (Expenses / Revenue) x 100 = operating ratio percentage

Our revenue in this scenario is $15,000.

Income Statement	Amount (in dollars)	% of Sales
Revenue from sales	$15,000	%
COGS	$7,000	%
Gross Profit	$8,000	%
Expenses	$3,700	%
Pre-Tax Profit	$4,300	%

Multiple Response Question

Use a calculator and the information provided to complete the balance sheet below:

ASSETS		
Current Assets		
Cash	$43,000	
Inventory	$250,900	
Accounts Receivable	$12,000	
Total Current Assets		

Multiple Response Question

Use a calculator and the information provided to complete the balance sheet below:

Long-term Assets		
Equipment	$52,100	
Total Long-term Assets		$52,100
Total Assets		

Total Current Assets:

$305,900

Multiple Response Question

Use a calculator and the information provided to complete the balance sheet below:

LIABILITIES		
Current Liabilities		
Bank Loans	$75,800	
Accounts Payable	$13,000	
Sales Tax Payable	$7,000	
Total Current Liabilities		

Multiple Response Question

Use a calculator and the information provided to complete the balance sheet below:

Long-term Liabilities		
Company Car	$18,200	
Total Long-term Liabilities		$18,200
Total Liabilities		

Total Current Liabilities:

$95,800

Multiple Response Question

Use a calculator and the information provided to complete the balance sheet below:

OWNER'S EQUITY		
Your Name, Capital		$244,000
Total Liabilities and Owner's Equity		

Total Assets: $358,000

Total Liabilities: $114,000

Match the term with the correct definition:

A snapshot in time of an organization's overall health. It shows all of its assets, liabilities, and shareholder equity. This includes actual cash in the bank, money owed to the organization, outstanding bills that need paid, any outstanding loans, etc.

Shows the revenues, costs, and expenditures over a period of time.

Provides aggregate data regarding all cash inflows a company receives from its ongoing operations and external investment sources. It also includes all cash outflows that pay for business activities and investments during a given period.

Terms:

Balance Sheet

Cash Flow Statement

Income or Profit and Loss Statement

Reflection

At the beginning of this module, we asked you to take a moment to reflect on your household financials. Now we'd like you to answer the same questions while focusing on your business.

What tools do you anticipate using to monitor the financial health of your business?

How will you know where you spend your money and why you spend it?

Will you be able to create and manage an accurate budget?

How can you take what you've learned in this module and apply it to your household?

How do you believe you will benefit by doing so?

Compare and Contrast

Take a moment to reflect on your learning and comparing and contrasting your answers.

What we learned about:

Accounts payable/receivable	Asset	Cash flow statement
Current assets/liabilities	Expenses	Gross profit
Liabilities	Liquidity	Long-term assets/liabilities
Marketable security	Owner's equity	Pre-tax profit
Ratios – *Current, Debt, Debt-to-equity, Financial, Operating and Quick*	Return on sales (%)	Revenue

Independent Practice

This week you should use the information in this module to develop your own business. Create a list of start-up costs and decide which option is best for you to finance them. Estimate figures for your business in order to carry out income statement analysis (including sales-data analysis, same-size analysis, operating ratio, and return on sales), and also create a balance sheet with all types of assets and liabilities (again, using made-up figures). Conduct same-size balance sheet analysis for that same company five years later and find the four balance sheet ratios for the most current year. Creativity is encouraged, but try to be realistic.

Today we learned how to explain how profitable a business is in terms of how much you have invested.

We learned how to utilize income statements (profit and loss statements) and analyzed an example income statement through ratio calculations.

We learned the parts of a balance sheet.

We described multiple financial statements.

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Accounts Payable

Money owed to a supplier by a business who paid for its products/services with a credit

Accounts Receivable

Money owed to the business by customers who paid for its products/services with a credit

Asset

Anything worth money that a business owns

Cash Flow Statement

A report that shows all cash coming in and going out and shows whether or not the company has enough cash on hand to cover all of their expenses each month

Cost of Goods Sold (COGS)

How much money a business spent acquiring the goods it sells

Current Assets

Assets that can be quickly sold and converted into cash in under one year; this includes cash, inventory, marketable securities, and accounts receivable

Current Liabilities

Debts that must be paid in under one year; this includes short term debt and accounts payable

Current Ratio

Current assets divided by current liabilities; determines how many times over you can pay your debt and includes cash and cash equivalents, marketable securities, accounts receivable, inventory, and prepaid expenses

Debt Ratio (%)

A business's total debt (liabilities) divided by its total assets, multiplied by 100

Total debt / total assets x 100

Debt-to-Equity Ratio (%)

A business's total debt (liabilities) divided by the owner's equity, multiplied by 100

Total debt / owner's equity x 100

Expenses

Money you expend to run the company

Financial Ratios

Various percents, ratios, or fractions you receive by interpreting financial data from your business

Gross Profit

A business's revenue minus its cost of goods; how much money the business made selling its good after accounting for how much they cost

Liabilities

Debts a business owes

Liquidity

The ability of its assets to be turned into money quickly and easily

Long-term Assets

Assets that take longer than one year to sell and convert into money; this includes long term investments and equipment

Long-term Liabilities

Debts that take longer than a year to pay off; this can include the mortgage on a business building

Marketable Security

An investment (such as a stock or bond) that can be turned into money quickly

Operating Ratio (%)

Expenses divided by revenue, multiplied by 100; how much revenue is being spent, per dollar, to cover expenses

Expenses / revenue x 100

Owner’s Equity

Assets subtracted by liabilities; shows how much a business is worth

Assets - liabilities

Pre-tax Profit

Gross profit minus expenses; how much profit is made before taxes are taken out

Gross profit - expenses

Quick Ratio

Cash, marketable securities, and accounts receivable divided by current liabilities; determines how many times over you can pay your debt and only includes cash and cash equivalents, marketable securities, and accounts receivable

Return on Sales (%)

Net profit divided by revenue, multiplied by 100; a ratio that shows how much revenue is being received as profit once COGS and expenses are taken out

Revenue

How much money a business makes before accounting for any expenses or other costs it had