PDHonline Course P203 (4 PDH)

How to Read a Financial Statement

Instructor: Lee Layton, PE

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5272 Meadow Estates Drive
Fairfax, VA 22030-6658
Phone: 703-988-0088
www.PDHonline.com

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How to Read a Financial Statement

Lee Layton, P.E

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Introduction

This course explains how to read and interpret the financial statements of a business enterprise. It is not an accounting course and it is written by a non-accountant for non-accountants. The purpose of the financial statements of a company is to provide information on the profitability and economic well-being of the organization. Accounting and the corresponding financial statements are the "language of business" and allow business owners, investors, bankers, and others to understand how the business is doing.

Everyday hundreds of financial transactions take place in the normal course of business and without some mechanism to compile and organize the transactions they would just be a mind-numbing jumble of data. To bring order to this chaos, accountants developed standard reporting guidelines for business data. The guidelines allow us to summarize a large number of transactions into groupings of similar transactions.

The standard reporting format includes three primary reports: The Balance Sheet, the Income Statement, and a Statement of Cash Flows. Sometimes other reports are included such as a Statement of Retained Earnings. To insure consistency, the reports must comply with guidelines known as Generally Accepted Accounting Principles (GAAP). GAAP is a set of accounting and financial reporting standards administered by the Financial Accounting Standards Board (FASB). More information about FASB can be found at www.FASB.org.

In this course we will analyze each of the three basic financial statements in detail, as well as other statements and key indicators of the financial well-being of the company. The first section is an overview of the financial statements, followed by detailed explanations of the Balance Sheet, Income Statement, Statement of Cash Flows, and Statement of Retained Earnings.

I. Financial Reporting

One of the advantages of standard reporting formats is that the financial results of a company can be evaluated on a comparable basis with other companies, since they are all using the same basic reporting format.

The process of compiling financial data includes,

- Recording a business transaction
- Classifying the transaction
- "Posting" a transaction to the appropriate Ledger account
- Summarizing the Ledger accounts

Posting is an accounting term that means to transfer the accounting entries from a journal into a ledger book in the order in which they were generated. *Ledger* is an accounting term that is used to describe a book of accounts in which data from transactions recorded in journals are posted and thereby classified and summarized.

Business transactions fall into five main accounts on the balance sheet and the income statement. They are,

- Assets
- Liabilities
- Shareholders' Equity
- Revenues
- Expenses

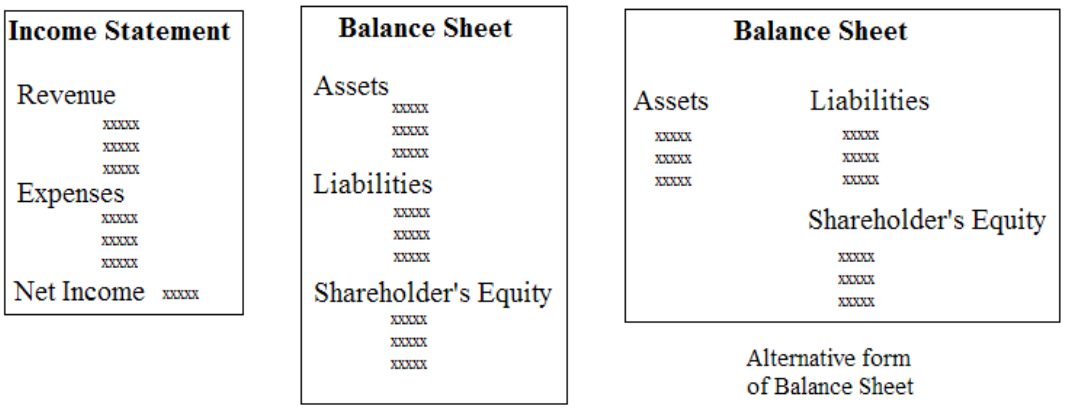
In addition to these five main accounts, accountants develop a *Chart of Accounts* for their particular business. For instance, in the Asset account, the accountant will likely include accounts for cash, accounts receivable, and pre-paid expenses among others. For the expense accounts, the accountant may include in the Chart of Accounts, rent expense, depreciation, payroll expenses, etc. The Chart of Accounts for this course will be shown momentarily.

The accounts: Assets, Liabilities, Shareholders Equity, Revenues, and Expenses are the main categories in the Balance Sheet and the Income Statement. Sub-accounts in these categories are listed in the Chart of Accounts. The Balance Sheet will list all balances in the Asset, Liability, and Shareholder's Equity accounts. The Income Statement will list the balances in the Revenue and Expense accounts. A Balance Sheet must always be accompanied by an Income Statement to get a true financial picture of the business.

On the Balance Sheet, Assets are always listed first, followed by Liabilities, and then Shareholder's Equity. In Some financial statements, the Balance Sheet is organized with the Assets on the left side of the page and the Liabilities and Shareholder's Equity on the right side of the page. Another form is to show the Assets followed by the Liabilities and Shareholder's Equity all in one column. Either approach is acceptable. Income Statement reports the

Revenues first followed by the Expenses in a columnar form. The following graphic shows the typical formats for the Income Statement and the Balance Sheet.

Income Statement and Balance Sheet Formats



Alternative form of Balance Sheet

One important distinction between the Balance Sheet and the Income Statement are the reporting periods. The Balance Sheet reports the Assets, Liabilities, and Shareholder's Equity as of a particular date, such as December 31, 2006. The Income Statement reports Revenues and Expenses for a given span of time, such as for the month of December, 2006, or for the year 2006.

While discussing the Balance Sheet, we need to mention the different forms for the Shareholder's Equity. *Shareholder's Equity* is the portion of the company that is owned by the shareholders. For a sole proprietor or partnership this account may be called Owner's Equity or Partner's Capital. In this course, we will use the term Shareholder's Equity.

For the purposes of this course, we will use the financial statements of a fictitious company known as the Retail Sales Corporation, or RSC. The company sells retail products such as refrigerators, washing machines, dryers, and other appliances and is a publicly traded company. The Chart of Accounts for RSC is shown below.

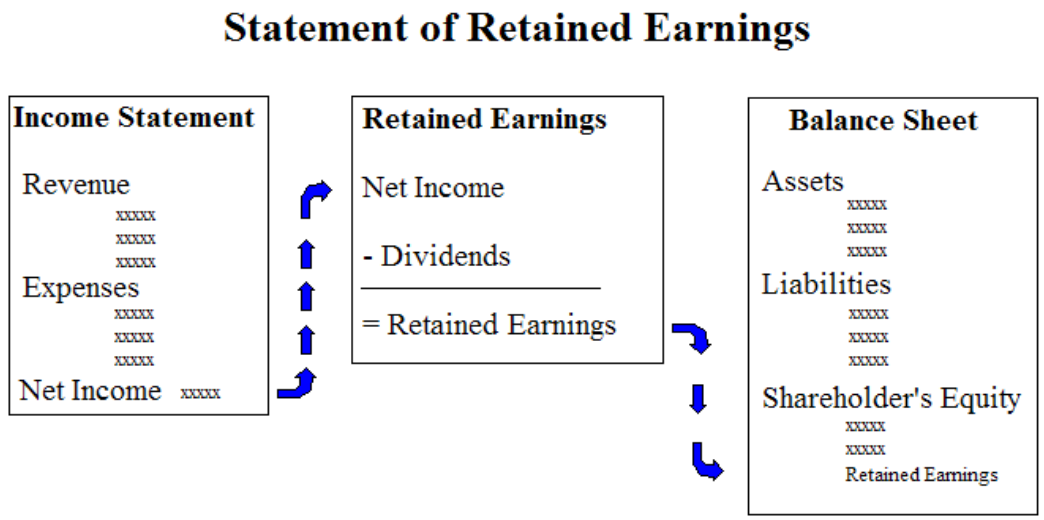
Retail Sales Corporation Chart of Accounts	
Balance Sheet	**Income Statement**
Asset Accounts	**Revenue Accounts**
Cash	Sales
Accounts Receivable	Less allowance for returns
Reserve for Doubtful Accounts	Cost of Goods Sold
Inventory	**Expense Accounts**
Prepaid Expenses	Salaries & Wages
Other Current Assets	Advertising
Long Term Investments	Utilities
Land	Rents
Buildings, Equipment, and Fixtures	Administration
Accumulated Depreciation	Depreciation
Liability Accounts	Dividends & Interest Income
Accounts Payable	Interest Expense
Notes Payable	Other Income
Accrued Expenses	Taxes
Taxes Payable	
Interest Payable	
Current Portion of Long Term Debt	
Long Term Debt	
Other Long Term Debt	
Shareholder's Equity	
Common Stock	
Additional Paid in Capital	
Retained Earnings	

GAAP also requires a Statement of Cash Flows to accompany the Balance Sheet and Income Statement to fully reveal the financial condition of the business. The purpose of the Statement of Cash Flows is to show the inflows and outflows of cash of the company. Since financial statements are usually based on accrual accounting procedures it may be difficult to really understand how much cash the business is actually generating. For instance, the income statement may show a strong profit for a given month due to great sales. But since many sales are on terms, the actual cash may not be collected for another 30-90 days, if at all. The Statement of Cash Flows helps the business owner to understand where his cash is coming from and where it is going. The cash flow statement can also be misleading though. If the business decides to sell a major subsidiary, it may generate a great deal of cash, but the cash is temporary

and will not be sustainable. It takes all three statements, the Balance Sheet, the Income Statement, and the Statement of Cash Flows to get a true picture of a company's financial condition.

The Statement of Cash Flows is divided into three sections. The first section shows cash generated by the normal operation of the business, such as customers paying for the items they have purchased. The second section covers the inflows and outflows of cash from investing activities such as buying and selling real estate and buildings or from making investments. The final section involves financing activities such as receiving cash from investors and from loans.

Another document that is frequently part of the financial statements of a business is a Statement of Retained Earnings. This is a simple document that links the Income Statement to the Balance Sheet. The net income shown on the Income Statement will flow to the Balance Sheet as retained earnings under the Shareholder's Equity section less any dividends paid out during the period. The Statement of Retained Earnings shows how much of the net income was distributed as dividends and how much was retained on the Balance Sheet.



Since net income can sometimes be a loss, or negative number, the retained earnings on the balance sheet may decrease instead of increasing.

II. Balance Sheet

The Balance Sheet is also known as a "statement of financial position" and its purpose is to reveal the assets, liabilities, and equity of the company. The assets of a company are what the company uses to operate the business. The liabilities and equity of the company are used to support the assets. The balance sheet gets its name from the following balance sheet equation,

Assets = Liabilities + Shareholder's Equity

The balance sheet equation must always be in balance, meaning that the assets of the company must always equal the sum of the liabilities and equity. To understand the balance sheet, consider the following example. A new manufacturing business is starting operations and the owner plans to buy a $450,000 building for the manufacturing production. To purchase the building, he will put in $50,000 of his own money and will obtain a $400,000 bank loan for the remainder of the purchase price. At the completion of this transaction he will have $450,000 in assets, a $400,000 liability (the loan), and $50,000 in owner's equity. Now, the owner purchases $100,000 in inventory from a vendor and the vendor gives him 30 days to pay for the inventory. His assets now increase to $550,000 and a new item, accounts payable, in the amount of $100,000 is added to the liabilities section. The owner's equity remains unchanged. His balance sheet now looks like this,

Balance Sheet

Assets		**Liabilities**	
Current Assets		**Current Liabilities**	
Inventory	$100,000	Accounts Payable	$100,000
Fixed Assets		**Long Term Liabilities**	
Property, Plant & Equipment	$450,000	Long-Term Debt	$400,000
Total Assets	$550,000	**Owner's Equity**	
		Capital	$ 50,000
		Total Liabilities & Equity	$550,000

This simple example shows that the balance sheet remained in balance with both the building acquisition and the purchase of inventory. The items on the balance sheet are presented in order of decreasing liquidity, which means that cash is shown first, followed by items that can be quickly converted to cash, etc.

To learn more about the balance sheet we will examine, in detail, all of the items on the balance sheet for our fictitious company, RSC. The balance sheet shown on the next page represents the financial position of RSC on December 31, 2006. The numbers are in thousands, so for the year ending 2006, RSC has total assets of $99,830,000.

Balance Sheet (000's)		
	Year Ending	
	2006	2005
Assets		
Current Assets		
Cash	2,480	1,800
Accounts Receivable	24,400	22,750
(less reserve for doubtful accounts)	(1,000)	(1,000)
Inventory	27,000	27,750
Prepaid Expenses	600	450
Other Current Assets	7,000	4,800
Total Current Assets	60,480	56,550
Fixed Assets		
Long Term Investments	350	300
Land	4,500	4,500
Buildings, Equipment, Fixtures	53,250	47,500
(less accumulated depreciation)	18,750	14,550
Total Net Fixed Assets	39,350	37,750
Total Assets	99,830	94,300
Liabilities		
Current Liabilities		
Accounts Payable	9,000	8,550
Notes Payable	7,600	9,150
Accrued Expenses	4,500	5,400
Taxes Payable	2,550	2,250
Interest Payable	1,800	1,800
Current Portion of Long Term Debt	900	0
Total Current Liabilities	26,350	27,150
Long-Term Liabilities		
Long-Term Debt	18,600	19,500
Other Long-Term Debt	2,400	2,250
Total Long-Term Liabilities	21,000	21,750
Shareholder's Equity		
Common Stock	3,000	3,000
Additional Paid in Capital	11,550	11,550
Retained Earnings	37,930	30,850
Total Shareholder's Equity	52,480	45,400
Total Liabilities and Equity	99,830	94,300

Assets

To begin our analysis of the balance sheet we will look at the Asset category. Assets are broken down into current assets and fixed assets. *Currents assets* are items that are expected into be converted to cash within a 12-month period. Current assets include cash, accounts receivable, Inventory, prepaid assets, and other current assets. Non-current assets are considered long term, or fixed assets. *Fixed assets* include equipment, buildings, property, and other long term investments. Fixed assets may also include intangible items such as copyrights and patents. Let's look at each item on RSC's balance sheet. The first item is cash.

Cash

Cash	2,480	1,800

Cash is a pretty simple term. This account is sometimes is labeled "Cash and Cash Equivalents" and is money in demand accounts in a bank or on-hand funds such as petty cash. RSC has $2,480,000 of cash available as of December 31, 2006. Notice that the cash increased from last December.

Accounts Receivable

Accounts Receivable	24,400	22,750
(less reserve for doubtful accounts)	(1,000)	1,000)

Remember that for many businesses, when a sale takes place the transaction does not immediately generate cash. The business may offer terms to pay such as "Net 30-days", etc. For manufacturing plants, when the product ships, the company will likely generate an invoice creating an account receivable entry on the balance sheet. Only when the customer actually pays, will the transaction be shown as cash on the balance sheet. Sadly, some customers will never pay so it is wise to create a contra-account to accounts receivable known as "less reserve for doubtful accounts" which recognizes that some of the accounts receivable will never be collected. The amount placed in the reserve for doubtful accounts is based on the prior experience of the company. RSC has $24.4 million in accounts receivable on its balance sheet and its reserve for doubtful accounts is only $1 million, or about 4% of the total accounts receivable.

Inventory

Inventory	27,000	27,750

Since RSC is in retail sales, the inventory likely consists of items that were purchased for resale to customers. Inventory is related to the *cost of goods sold* on the income statement. Accounting principles state that inventory should be valued on the balance sheet at its cost or at its market price, whichever is lower. Normally the inventory will be valued at cost, but if the inventory is obsolete, perhaps because of new technology, the value of the inventory may need to be *written down* to its market value.

There are four accepted methods for valuing inventory: Specific Identification, FIFO, LIFO, and Weighted Average. Specific Identification is the process of linking the sale of product to a particular product in inventory. For instance, if RSC sells refrigerators, it would link a refrigerator sold today to a specific refrigerator in inventory and the cost of goods sold would be based on the purchase price of that specific refrigerator. This method is best used for low-volume, high value products such as Boeing Aircraft Company selling an airliner to Delta Airlines. FIFO is first-in-first-out and assumes that when a sale occurs the oldest products in

inventory are used to fulfill the order. FIFO tends to help maintain the value of the inventory close to the balance sheet value. During times of rising prices, FIFO can distort the value of the cost of goods sold leading to higher than expected income on the income statement. LIFO is last-in-first-out and assigns the most recent inventory purchases to the cost of goods sold. This approach most closely aligns the market selling price with the market value of the cost of goods sold. Since LIFO naturally assigns a higher value to cost of goods sold, it has the effect of lowering net income, which lowers income taxes due from the sale. LIFO is widely used because of the tax benefits. The IRS permits the use of LIFO, provided the company uses this method for both tax reporting and financial reporting. The weighted average approach is to divide the total inventory acquisition cost by all units available for sale to arrive at a weighted average unit cost. This unit cost is used to determine the cost of goods sold value. The weighted average method is easy to use and produces a result somewhere between FIFO and LIFO. Any of these four methods are acceptable for recording inventory provided the company is consistent in its application of the method.

Prepaid Expenses	600	450

Prepaid Expenses

Insurance premiums, rent, advertising, and other services that the company has paid for, but not yet received the full benefit, are known as prepaid expenses. To be listed as a current asset the prepaid expense should expire within twelve months. Insurance premiums are one of the most common prepaid expenses that show up on the balance sheet since insurance is typically purchased for a one-year period in advance. As a prepaid expense is consumed (e.g. every month for an insurance policy) the expense is recognized on the income statement and reduced on the balance sheet.

Other Current Assets	7,000	4,800

Other Current Assets

This account is used to accumulate many small current assets that are not significant and do not warrant a separate account. In the case of RSC, the other current asset account is large at $7 million, but is consists of numerous small transactions.

Long Term Investments	350	300

Long Term Investments

Investments that will not mature for one year or more are considered long-term investments. The investments are recorded at cost, but are subject to write-down if it is believed that the fair market value is substantially less than the amount recorded on the balance sheet.

Land	4,500	4,500

Land

Land is a fixed asset and is placed on the balance sheet at cost. The cost is not adjusted for changes in value, so a property bought in 1950 for $1,000 per acre will still be on the balance sheet today for $1,000 even though the market value may be $1,000,000! This means that the value of land on the balance sheet may have significantly more value than is reflected on the balance sheet. Land is not depreciated over time.

Buildings, Equipment, Fixtures	53,250	47,500
(less accumulated depreciation)	18,750	14,550

Buildings, Equipment, Fixtures

This category includes warehouses,

buildings, machinery, vehicles, furniture, computer equipment and other tangible items needed to operate the business. These assets are placed on the balance sheet at cost. A contra-account, accumulated depreciation, is used to reflect the loss of life of the equipment due to age and wear. The deprecation rate is likely different for the various classes of equipment listed in this account and the contra-account is an accumulation of all of the various depreciation amounts. Using the matching principle, the depreciation period should closely match the useful life of the equipment. The contra-account increases during each period, which results in a net reduction in the buildings, equipment, and fixtures account.

Several methods are available to depreciate the value of equipment. The most common methods are Straight-Line Depreciation (SLD), Double-Declining Balance (DDB), Sum-of-Years-Digits (SOYD), and Modified Accelerated Capital Recovery System (MCARS). The simplest is the Straight-Line (SLD) method, which takes the difference in the original price and the ending, or residual, value divided by the number of depreciation years. The straight-line method is,

SLD = (Price – Residual) / n

Where,
Price = Original purchase price.
Residual = Ending value.
n = Number of years in the depreciation cycle.

As an example of straight-line depreciation, consider a $10,000 computer investment that will have a salvage value of $1,000 at the end of five years. The annual depreciation is,

SLD = (10,000 – 1,000) / 5

SLD = $1,800.

Another popular approach is the Double-Declining Balance method. With this approach the balance in the account is doubled and divided by the number of years the asset is being depreciated. A salvage value is not considered with the double-declining balance method. The formula is,

$DDB = (2 * Balance_N) / n$

Where,
DDB = Double-Declining Balance.
Balance = Balance in the account.
N = Year in the depreciation cycle.
n = Total number of years in the depreciation cycle.

Using the previous example, the double-declining balance depreciation is,

For year one,

$DDB_1 = (2 * 10,000) / 5)$

$DDB_1 = \$4,000.$

For year two,

$DDB_2 = (2 * (10,000 – 4,000)) / 5$

$DDB_2 = \$2,400.$

The Sum-of-Years-Digits (SOYD) is a depreciation method that decreases the asset at a decreasing rate. A salvage value must be assumed for this method. The formula is,

SOYD = [(Price – Residual) * (n +1 –N)] / [n(n+1)/2]

Where,
SOYD = Sum-of-Years-Digits depreciation amount.
Price = Original purchase price.
Residual = Ending value.
N = Year in the depreciation cycle.
n = Number of years in the depreciation cycle.

Continuing with our examples, the SOYD is,

For year one,

$SOYD_1 = [(10,000 – 1,000) * (5 +1 –1)] / [5(5+1)/2]$

$SOYD_1 = \$3,000.$

For year five,

$SOYD_5 = [(10,000 – 1,000) * (5 +1 –5)] / [5(5+1)/2]$

$SOYD_5 = \$600.$

The most confusing depreciation method – and the one required by the IRS for tax purposes – is the Modified Accelerated Capital Recovery System (MCARS).

This method is a combination of declining balance and straight-line depreciation methods. Under MACRS, property is divided into nine property classes and the depreciation schedule for each property class is specified. The first six property classes use the declining balance in the early years and then convert to straight line depreciation in the later years. The remaining property classes use straight-line depreciation exclusively.

The MACRS depreciation is taken on the full value of the investment without any consideration for the salvage value. This makes calculating the depreciation simpler since a future salvage value does not have to be estimated. Of course, this also makes the future salvage value a taxable event. A disadvantage of the MACRS is that the depreciation schedule required by MACRS may not coincide with the true life of the investment. For example, a specialized machine may only have a five-year life, but MACRS will require that the depreciation be spread out over seven years.

MACRS only allows one-half of the depreciation to be deducted in the first year and the remainder is deducted in the final year. This, in effect, adds another year to each schedule. The first property class is a 3-year schedule for small tools and other minor equipment. Because of the half-year convention, the depreciation schedule for 3-year property is actually four years. Listed below is an explanation of each of the MACRS property classes.

Modified Accelerated Capital Recovery System

Property Class (Years)	Typical Assets
3	Small tools and other minor equipment
5	Computer equipment, vehicles, photocopiers
7	Machinery, equipment, office equipment
10	Heavy machinery
15	Utility systems and land improvements
20	Real property with a life of less than 27.5 years
27.5	Residential rental property
31.5	Non-residential real property (prior to 1993)
39	Non-residential real property (after 1993)

The following table shows the MACRS depreciation schedule for property classes 3 through 20. The remaining property classes simply use straight-line depreciation.

Modified Accelerated Capital Recovery System Depreciation Percentages						
Year	**3-Year**	**5-Year**	**7-Year**	**10-Year**	**15-Year**	**20-Year**
1	33.3	20.0	14.3	10	5.0	3.8
2	44.5	32.0	24.5	18	9.5	7.2
3	14.8	19.2	17.5	14.4	8.6	6.7
4	7.4	11.5	12.5	11.5	7.7	6.2
5		11.5	8.9	9.2	6.9	5.7
6		5.8	8.9	7.4	6.2	5.3
7			4.5	6.6	5.9	4.9
8				6.6	5.9	4.5
9				6.5	5.9	4.5
10				6.5	5.9	4.5
11				3.3	5.9	4.5
12					5.9	4.5
13					5.9	4.5
14					5.9	4.5
15					5.9	4.5
16					3.0	4.5
17						4.5
18						4.5
19						4.5
20						4.5
21						2.2
Total	100	100	100	100	100	100

Again using our example, the depreciation is based on the five-year class for property equipment. The depreciation percentage can be found from the table shown above. The depreciation value is,

For year one,

$MCARS_1 = 10{,}000 * 0.20$

$MCARS_1 = \$2{,}000.$

For year five,

$MCARS_5 = 10{,}000 * 0.058$

$MCARS_5 = \$580.$

The complete five year depreciation for each method is shown in the following table.

Summary of Depreciation Methods For $10,000, 5-year computer equipment with $1,000 salvage value				
Year	**SLD**	**SOYD**	**DDB**	**MCARS**
1	1,800	4,000	3,000	2,000
2	1,800	2,400	2,400	3,200
3	1,800	1,440	1,800	1,920
4	1,800	864	1,200	1,150
5	1,800	518	600	1,150
6				580
	9,000	9,222	9,000	10,000

As we will see later, the changes in depreciation from one period to another will show up on the income statement as an expense item.

Other Fixed Assets

These are not shown on the RSC balance sheet, but other assets that are sometimes found on balance sheets include deferred charges and intangible assets. Deferred charges are similar to prepaid expenses, but are not a current asset and are expenses that are recovered over a long period (greater than one year).

Intangible assets such as goodwill, trademarks, patents, and copyrights are examples of other fixed assets.

Liabilities

Like assets, liabilities are divided into current liabilities and long-term liabilities. *Current liabilities* include accounts payable, notes payable, accrued expenses, taxes payable, interest payable and the current portion of any long-term debt. *Long-term liabilities* include long-term debt and other non-current liabilities.

Accounts Payable

Accounts Payable	9,000	8,550

In the normal course of business, the company will owe vendors money. We don't often think of the local the local electric company, the phone company, and the gas company as creditors, but since they provide a service, and are paid after the product or service is consumed, they are a creditor. Material suppliers and anyone else who sells the business goods and services on credit are creditors. The amounts owed to the creditors are recorded on the balance sheet as a liability in accounts payable.

Notes Payable

Notes Payable	7,600	9,150

Short-term bank loans and temporary lines of credit that are due within one-year are recorded in the notes payable account. Since the loan will most likely have an interest charge, there will also be an entry in the interest payable

account. RSC has a short-term line-of-credit loan of $7.6 million at a 12.3% interest rate. Loans with maturities exceeding one-year are considered long term debts.

Accrued Expenses	4,500	5,400

Accrued Expenses

Under an accrual accounting system, some expenses are incurred before they are actually paid. Hours worked by employees, but not yet paid is an example of an accrued expense. Earned vacation credit and sick leave balances are also accrued expenses of the company.

Taxes Payable	2,550	2,250

Taxes Payable

Taxes are another form of accrued expenses, but they are frequently shown in a separate category, taxes payable, for clarity. Usually the decision to show taxes as a separate item from regular accrued expenses is dependent on the amount of taxes owed.

Interest Payable	1,800	1,800

Interest Payable

Interest on bank loans is another example of an accrued expense. Like taxes, interest is frequently lumped into one accrued expense category. In our example, interest payable is broken out as a separate item.

Current Portion of Long Term Debt	900	0

Current Portion of Long Term Debt

The portion of a long term debt that will be retired within one year should be reported as a current liability, along with the interest charges, with a corresponding reduction in the long term debt account.

Long-Term Debt	18,600	19,500

Long-Term Debt

Long term debt is not a current liability, but is a liability that may extend for several years or over several reporting periods. This debt may be in the form of debentures or loans. A *debenture* is a long term debt instrument. A debenture is not usually secured by any collateral such as property owned by the company, but instead is only backed by the credit-worthiness of the company. One form of debenture is a bond. A mortgage is a *secured loan* since it is tied to some asset of the company.

In 2005, RSC received a $19.5 million loan at 6.8% interest. The first payment is due in 2006 and is reflected in the current portion of long term debt mentioned above. If the company defaults on the mortgage the creditors will have priority over the holders of debentures.

Other Long-Term Debt	2,400	2,250

Other Long-Term Debt

Other long term liabilities include small loans with maturities over one year and deferred income taxes. Deferred income taxes result from differences in the IRS tax depreciation schedules and the actual depreciation schedule used by the company for financial reporting. RSC has one relatively small loan of $2.4 million at a 10% interest rate.

Shareholder's Equity

Shareholder's equity is the owners' share of the company. In a stock company such as RSC, the owners are the stockholders. The ownership is reflected in the capital stock owned by the shareholders and the retained earnings of the company.

Common Stock	3,000	3,000
Additional Paid in Capital	11,550	11,550

Capital Stock

The capital stock of the company may include common stock and preferred stock. The following is a general description of each type of stock, though there are many variations on how stock is issued. *Preferred stock* looks somewhat like a bond in that the dividend is a fixed amount, but unlike interest on a bond, the dividends are not an obligation and are only disbursed when the company decides to declare a dividend. Also unlike bonds, preferred stock does not have a maturity date. Some of the benefits of preferred stock to the stockholder are that the stock has a higher claim on the assets of the company if the company were to liquidate, Dividends are paid on preferred stock before common stock, and preferred stock is frequently cumulative, which means if a dividend is not paid during a given quarter it will be declared a *dividend in arrears* and will be paid before any common stock dividends are disbursed. Preferred stock does not entitle the owner to voting rights.

Common stock carries voting rights and the value of a common stock can increase (or decrease) dramatically based on the marketplace's opinion of the value of the company. Unlike preferred stock, the dividend on common stock is not defined. The amount and timing of a dividend disbursement on common stock is at the company's discretion.

Important stock terms include authorized stock, issued stock, and outstanding stock. *Authorized stock* is the number of shares of common stock the company is authorized to offer to the public. Once a stock is sold to the public it becomes an *issued stock*. All of the stock of the company that is in circulation is known as *outstanding stock*. There can be a difference in issued and outstanding stock due to treasury stock. *Treasury stock* results from the company buying back issued and outstanding stock and pulling it out of circulation. A company may buy back stock to help shore up the stock price or to provide stocks for incentives to employees.

Common stock is issued at a *par value*, or face value, which is defined in the organizing documents of the company. The actual value of the stock is typically much greater than the par value and this additional value is shown on the balance sheet as additional-paid-in-capital. A stock may have a par value of only $1.00, but the actual value of the stock is likely much higher. If the company issues stock at $5.00 per share the amount above the par value, which is $4.00 per share, will be recorded as *additional paid in capital* on the balance sheet.

RSC's capital stock is comprised of only common stock. The company has,

Authorized	5,000,000 shares
Issued	3,000,000 shares
Outstanding	3,000,000 shares

The par value of the stock is $1.00 per share, so the common stock is reported on the balance sheet at $3 million. The additional-paid-in-capital shown on the balance sheet is $11.55 million.

Companies report earnings on a per share basis and will typically report both basic earnings per share and diluted earnings per share. The basic earnings per share are the earnings (net income) divided by the number of shares outstanding. The diluted earnings per share takes into account shares of stock the company may issue in the near future, which will increase the number of shares outstanding. When the number of shares increases, the earnings will be spread over more shares, which will reduce, or dilute, the earnings per share.

Dilution is frequently caused by stock options, warrants, and convertible preferred stocks. A *stock option* is a form of executive compensation that is used to encourage the executives to increase shareholder value. A stock option gives the executive the right to buy a certain number of shares by a specific date and price. If the stock option is taken, or exercised, the company issues new stock. The stock option may be priced at today's market value and the executive may have several years to exercise the option. Therefore, if the stock doubles in value, the executive can buy the stock at the option price and realize an immediate 100% return! A *warrant* is a security that entitles the holder to buy stock at a specific price, but the price is higher than the current market price. This gives the owner of the warrant an opportunity to take advantage of stock price appreciation – but only if the stock price increases above the warrant price. *Convertible preferred stock* can also dilute earnings per share. Preferred stocks that can be exchanged for common stocks are called convertible preferred stocks. The conversion point is normally after some amount of time lapses from the original issue date. The owner of preferred stock will likely make the conversion decision based on the market price and future appreciation potential of the stock.

Consider the following example of stock dilution. If the executives of RSC have stock options for 200,000 shares of stock, then when they exercise their option the total number of shares outstanding will be 3,200,000. Prior to the stock options the earnings per share was 8,280 / 3,000 = $2.76. After exercising the stock options the earnings per share drops to 8,280 / 3,200 = $2.59.

RSC has not issued any stock options or warrants, and does not have any preferred stock.

Retained Earnings

Retained Earnings	37,930	30,850

When a company earns profits, it may either distribute the earnings to the shareholders in the form of dividends or reinvest the earnings back into the company. The profits that are not distributed as dividends are known as retained earnings. For RSC, the retained earnings balance in 2006 was $37.93 million. As we will see when we look at the income statement, the difference in the retained earnings from 2005 to 2006 does not equal the net income in 2006, so the company must have made a dividend distribution.

III. Income Statement

The income statement shows the operating results of the company for a given time period. It matches revenues from sales against the cost of making those sales to arrive at a net income (or loss).

The first portion of the income statement is the revenue section. This section shows the sales of the company less the cost of the goods sold to arrive at a gross profit. Gross profit is the profit obtained from the sale without considering the operating expenses of the company. The next section of the income statement includes the operating expenses of the company such as salaries, rent, utilities, advertising, interest charges, and other expenses associated with running a company. Often the operating expenses are not as detailed as shown on the accompanying income statement for RSC. Many companies will just list the operating expenses as Selling, General, and Administrative (or SGA) expenses.

Subtracting the operating expenses from the gross profits gives us the operating income of the company. Non-operating items are next and include dividends and interest income received, interest expense, and other non-operating related income, which then yields the income before taxes. After subtracting taxes, we are left with the net income (or loss) of the company. See the Income Statement for RSC on the next page.

Income Statement (000's)		
	Year Ending	
	2006	2005
Revenue		
Sales	118,000	110,000
(less allowance for returns)	3,000	2,000
Net Sales	115,000	108,000
Cost of Goods Sold		
Beginning Inventory	97,850	123,000
Purchases	96,200	52,400
Ending Inventory	113,800	97,850
Cost of Goods Sold	80,250	77,550
Gross Profit	34,750	30,450
Operating Expenses		
Salaries & Wages	7,125	6,450
Advertising	2,300	2,550
Utilities	95	110
Rents	105	90
Administration	4,875	3,450
Depreciation	4,200	3,750
Total Operating Expenses	18,700	16,400
Total Operating Income	16,050	14,050
Dividends & Interest Income	750	1,500
Interest Expense	(2,500)	(2,600)
Other Income	(500)	0
Income before Taxes	13,800	12,950
Taxes	5,520	5,180
Net Income	8,280	7,770

Sales

Sales	118,000	110,000
(less allowance for returns)	3,000	2,000
Net Sales	115,000	108,000

Revenue generated from making sales of the company's products is the source of sales. Some companies will break out sales into several categories with the most important revenue source shown first, etc. Our fictitious company, RSC is in retail sales, so we can expect they will experience some returns of products sold. The company prepares for returns financially by including a line item on the income statement called *less allowance for returns*. The returns amount is typically based on the prior experience of the company. There may also be a separate line item for discounts on merchandise and price reductions. After considering the impacts of returns, price reductions, and discounts, the company is left with net sales. For 2006, RSC had net sales of $115 million, which is up 6.5% over 2005. Of course, the company did not clear $115 million, because of the cost of the merchandise sold and other operating expenses.

Cost of Goods Sold

Cost of Goods Sold		
Beginning Inventory	97,850	123,000
Purchases	96,200	52,400
Ending Inventory	113,800	97,850
Cost of Goods Sold	80,250	77,550

The cost of goods sold is the direct cost of the merchandise that RSC sold during the year. Since RSC is a retail company, they buy finished goods such has washing machines, refrigerators, microwaves, etc, for re-sale. The cost of goods sold includes the cost of the merchandise, shipping costs, and other costs directly attributable to the merchandise that was sold during the period. If RSC was a manufacturing company, then the cost of goods sold would include raw material costs, manufacturing labor, and other directly related manufacturing costs.

RSC determines its cost of goods sold by calculating the change in inventory during the period. If you will notice for 2006, RSC began the year with $97.85 million in inventory and purchased an additional $96.20 million in merchandise. The ending inventory in 2006 was $113.80 million, and the cost of goods sold (COGS) is,

COGS = Beginning Inventory + Purchases – Ending Inventory

COGS = 97.85 + 96.20 – 113.80 = $80.25 million.

So, the cost of goods sold, based on the change in inventory, is $80.25 million.

Gross Profit

Gross Profit	34,750	30,450

Gross profit is the net sales minus the cost of goods sold and is an important term in considering the financial health of a company. There are usually good industry norms to compare the gross profit levels of the company against. For RSC, the gross profit for 2006 is $34.75 million, which is 29% of sales.

Operating Expenses

Expenses that are not directly related to the cost of the merchandise sold are grouped under operating expenses. Many companies just label this category *Selling, General, and Administrative* (SGA. As you can see, for RSC, the operating expenses include wages and salaries, advertising, utilities, rent, and other administrative costs.

Operating Expenses		
Salaries & Wages	7,125	6,450
Advertising	2,000	2,550
Utilities	95	110
Rents	105	90
Administration	4,875	3,450
Depreciation	4,200	3,750
Total Operating Expenses	18,700	16,400

As depreciation is recognized on the balance sheet, it becomes an expense item (cost) on the income statement. Referring back to the balance sheet, the accumulated depreciation increased from $14.55 million in 2005 to $18.75 million in 2006, which is a difference of $4.2 million. This amount, $4.2 million, must be recognized as an expense in 2006.

Lease expenses may also show up in the operating expenses. However, a lease may be either an operating lease or a capital lease and the type lease will affect how a lease is reported on the income statement and balance sheet. With an operating lease, the lessee rents the property with no rights of ownership such as renting an automobile. An operating lease shows up on the income statement as a rent expense, but it does not impact the balance sheet. With a capital lease the lessor transfers the majority of the risks and benefits of ownership to the lessee. A capital lease is like leasing an automobile, where the lessee pays the insurance, maintenance and operating expenses of the automobile and has the option of purchasing the vehicle for some residual value at the end of the lease. A capital lease shows up on the income statement as an interest expense and a depreciation expense. A capital lease will also appear on the balance sheet as an asset (the value of the lease) and a liability (the lease payment obligation). The following table shows the differences in the treatment of an operating lease and a capital lease.

Differences in Operating Leases and Capital Leases		
	Income Statement	**Balance Sheet**
Operating Lease	Rent Expense	No Entry
Capital Lease	Interest Expense Depreciation Expense	Asset Liability

A company may elect to use either an operating lease or a capital lease as needed to meet the financial needs of the company. However to qualify as a capital lease the lease must meet the following four criteria:

1. The title is transferred to the lessee by the end of the lease term.
2. A (relatively) inexpensive purchase option is available at the end of the lease term.
3. The lease term must extend for at least 75% or more of the useful life of the asset.

4. At the start of the lease, the present value of the lease payments must be 90% or more of the property's fair market value.

The total operating expenses for RSC for 2006 are $18.7 million. The operating expenses for RSC grew from $16.4 million in 2005 to $18.7 million in 2006, which is a 14% increase. By comparing the operating expenses to sales, which only increased a little over 7%, we see that the company's expenses are growing faster than its sales.

Total Operating Income

Total Operating Income	16,050	14,050

Total operating income is found by subtracting the operating expenses from the gross profit of the company. For RSC in 2006, the operating income was $16.05 million. There are just a few miscellaneous items left on the income statement before we get to the net income of the company.

Other Income Statement Items

After operating expenses about all that is left to cover are some non-operating income and expense items of the company and taxes.

Dividends & Interest Income	750	1,500
Interest Expense	(2,500)	(2,600)
Other Income	(500)	0
Income before Taxes	13,800	12,950
Taxes	5,520	5,180

The company has some investments that generate income in the form of dividends and interest. In 2006, the dividend and interest income was $750,000. The company also has interest expense and another charge for some miscellaneous costs which is labeled other income. The interest expense of $2.5 million is the result of,

Notes Payable	$ 7,600,000 * 12.3% =	$ 935,000
Long Term Debt	$19,500,000 * 6.8% =	1,326,000
Other Long term debt	$ 2,400,000 * 10.0% =	240,000
	Total =	$2,500,000

Note: The long term debt includes both the current portion of the long term debt of $900,000 plus the remaining long term debt of $18,600,000 for a total long term debt of $19,500,000.

These three items: Dividends, interest expense, and other income, further adjust the income resulting in $13.8 million in income before taxes. The tax rate is assumed to be 40%, which results in a tax liability of $5.52 million in 2006.

Net Income

Net Income	8,280	7,770

Finally we arrive at the "bottom line", which is *net income*. Net income is the income of the company after we consider all the expenses the company incurred during the income statement period. For 2006, RSC has a net income of $8.28 million. If the company had lost money during the year, the net income would be negative and would be shown in parenthesis.

In addition to net income another term, *comprehensive income*, is beginning to appear on income statements. Comprehensive income is a relatively new term that takes into account unusual

events such as foreign currency adjustments, pension liability adjustments and certain investment transactions. RSC does not have any unusual events so the term comprehensive income is not used.

IV. Statement of Cash Flows

Probably one of the most important financial reports of a company is the statement of cash flows. Remember, that because of the accrual method of accounting, the net income shown on the income statement does not represent the cash received by the company. The statement of cash flows shows how much cash the company actually generated and what it did with the cash.

The statement of cash flows is broken down into three categories,

- Operating activities
- Investing Activities
- Financing Activities

There are two approaches to developing a statement of cash flows: The direct method and the indirect method. We will use the indirect method, which adjusts the net income on the income statement to reconcile it with the actual cash the company received, or used, in the operation of the company. The *operating activities* include the primary business activity of the company exclusive of making investments and borrowing money.

Investing activities include purchasing and selling assets such as buildings, equipment, etc, and purchasing financial assets. For instance, if the company buys a new piece of equipment, the investing section would show a cash outflow because of the cash used in the transaction. If the company sells a portion of its investment portfolio the proceeds would be shown as a cash inflow in the investing section.

Financing activities include issuing and repaying debt, and making interest and dividend payments. Cash inflows may be the result of selling stock or borrowing money from a bank. Repaying debt, such as paying off a bank loan will be a cash outflow in the financing section.

A statement of cash flows for RSC is shown on the next page.

Statement of Cash Flows (000's)	
	Year Ending 2006
Operating Activities	
Net Income	$8,280
Adjustments to Net Income	
Depreciation	4,200
Increase in Accounts Receivable	(1,650)
Decrease in Inventory	750
Increase in Prepaid Expenses	(150)
Increase in Other Current Assets	(2,200)
Increase in Accounts Payable	450
Decrease in Accrued Expenses	(900)
Increase in Taxes Payable	300
Total Adjustments	800
Net cash provided by operating activities	9,080
Investing Activities	
Purchase of Fixed Assets	(5,750)
Purchase of Securities	(50)
Net cash provided in investing activities	(5,800)
Financing Activities	
Payment of Notes Payable	(1,550)
Payment of Dividends	(1,200)
Repayment of Long-term Debt	-
Repayment of Other Long-term Debt	150
Net cash provided in financing activities	(2,600)
Net Increase in Cash	680
Beginning Cash	1,800
Ending Cash	$2,480

Operating Activities

To calculate the statement of cash flows' operating section we must adjust net income for changes in non-cash current assets and current liabilities. An increase in a non-cash current asset results in a negative adjustment to net income. An increase in current liabilities results in a positive adjustment to net income. The following formula is useful for calculating operating cash flows.

To Net Income,

Add Depreciation expense
Add a decrease in Current Assets, or subtract an increase in Current Assets
Add an increase in Current Liabilities, or subtract a decrease in Current Liabilities

The result equals Cash flows from Operating Activities.

	2006	2005
Accounts Receivable	24,400	22,750

As an example of the calculations involved in the statement of cash flows, let's look at accounts receivable. Remember that accounts receivable is a current asset. The accounts receivable from the balance sheet are shown in the adjacent table. From 2005 to 2006 the accounts receivable increased to $24.4 million, which is a $1.65 million increase. An increase in accounts receivable means that others owe RSC money so it is has a negative impact on cash. Therefore, a negative $1.65 million needs to be recorded on the cash flow statement. A change in the reserve for doubtful accounts will also have an impact on cash flow, but since this account did not change from 2005 to 2006, nothing is shown on statement of cash flows for the reserve for doubtful accounts.

Now let's look at accounts payable. The adjacent table shows the accounts payable for 2006 and 2005. This account increased from $8.55 million in 2005 to $9.00 million in 2006, which is a $450,000 increase. Since accounts payable are amounts RSC owes to others, it has a positive impact on cash. Therefore, a positive $450,000 should be reported on the cash flow statement.

	2006	2005
Accounts Payable	9,000	8,550

All other asset and liability accounts are similarly analyzed and reported in the operating section of the statement of cash flows. For RSC, after all accounts were analyzed, the company had a net gain of cash from operations of $9.08 million. This is an important number to consider when analyzing a financial statement. A company that is not generating cash from its everyday operations may have serious financial problems.

Investing Activities

Purchasing property, plant, equipment and investments such as stocks and bonds are examples of investing activities on the statement of cash flows. These items are straight-forward on the cash flow statement since purchasing these items will cost money, an increase in any of these accounts causes a negative change on the cash flow statement. Likewise, selling equipment and investments generates cash and is a positive event on the cash flow statement.

For RSC, there are two entries under the investing activity category. The first is the increase in the Buildings, Equipment, and Fixtures account, which increased from $47.5 million in 2005 to $53.25 million in 2006, or $5.75 million. The other item is the additional $50,000 long term investment made in 2006 that increased the total long term investment from $300,000 in 2005 to $350,000.

Financing Activities

Funds generated from the issuance of stock or bonds will create a positive change on the cash flow statement. A positive change in long term debt and a positive change in shareholder's equity are positive events on the cash flow statement. For RSC, the financing activities include the decrease in notes payable, the payment of dividends, and the repayment of other long term debt. Notice that the long term debt didn't change even though $900,000 was moved to current liabilities section as the current portion of long term debt. In total, the financing activities of RSC consumed $2.6 million of the company's cash.

As mentioned at the beginning of this section, the statement of cash flows is one of the most important financial documents. A company may look profitable on the income statement, but if it is not collecting its receivables it may soon find itself short of cash. Likewise, a company may show an increase in cash on the balance sheet, but looking at the statement of cash flows may indicate the cash is the result of selling off its assets.

Free Cash Flow

Another term that is frequently used and that is related to the Statement of Cash Flows is *Free Cash Flow*. Free cash flow is a good measure of a company's ability to continue operations. Free cash flow is determined by subtracting cash used for capital expenditures from the cash used in operations. It looks at the cash a company has remaining after paying its bills such as salaries, rent, interest expenses, taxes, etc and making capital expenditures, such as buying new buildings and equipment. For RSC, the free cash flow is,

Free Cash Flow (000's)

Net cash provided by operating activities	$9,080
Purchase of Fixed Assets	-5,750
Free Cash Flow	$3,330

RSC's free cash flow is substantial, which is one indicator of a healthy company. A negative free cash flow is not necessarily bad though, since it may indicate that the company is investing heavily in expansions.

While we are discussing free cash flow we should also mention EBITDA. Earnings before interest, taxes, depreciation, and amortization (EBITDA) are frequently reported by companies as a measure of cash flow. Some analysts eschew EBITDA because, by definition, it looks at the earnings of the company excluding interest payments, taxes, and capital acquisition costs (depreciation and amortization expenses). But, of course, the company must pay interest, taxes, and capital acquisition costs, so EBITDA does not appear to be a very good indicator of the

financial health of a company. Whatever the benefits of measuring EBITDA, it is important to remember that it is not a measure of cash flow.

V. Statement of Retained Earnings

The statement of Retained Earnings is included to give a clear picture of what happens to the net income of the company. It is often included at the bottom of the income statement, but for clarity we will include a separate form.

The table shown below includes data for 2004 to help us see the progression of the retained earnings. The net income for the current period is added to the retained earnings balance to determine the new retained earnings. However, if the company made a dividend distribution, it is subtracted from the retained earnings.

Statement of Retained Earnings (000's)			
	2006	**2005**	**2004**
Retained Earnings – Previous Period	$30,850	$23,530	$17,720
Net Income	8,280	7,770	6,500
Total	39,130	31,300	24,220
Dividends Declared	1,200	450	690
Retained Earnings	$37,930	$30,850	$23,530

If you will recall, RSC has 3,000,000 shares outstanding. The company made the following distributions,

Year	Dividend
2004	$0.23 per share
2005	$0.15 per share
2006	$0.40 per share

With these distributions, the dividend payments will be $690,000, $450,000, and $1,200,000 per year respectively for 2004, 2005, and 2006.

Let's look at the statement of retained earnings for 2006. We start with the retained earnings from the previous year. From the balance sheet for 2005 we see a retained earnings balance of $30.85 million. To this we add the net income from 2006. From the 2006 Income Statement the net income was $8.28 million, which gives us total retained earnings, before dividends, of $39.13 million. Subtracting the 2006 dividend payment of $1.2 million leaves $37.93 million in retained earnings, which will be reported on the 2006 balance sheet.

VI. Ratios

There are many financial measures that are useful in determining the financial health of a company. We will break the measurements down into four categories: Profitability, short-term liquidity, long term solvency, and dividends. The ratios shown in these categories are just a few of the popular ratios for analyzing the performance of a company. There are many more ratios that can be used to gain further understanding of the company's performance. (Note: For clarity the calculations will be in thousands unless otherwise noted.)

Profitability Ratios	
Gross Profit as a percent of Sales	$\frac{\text{Gross Profit}}{\text{Sales}} * 100$
Operating Margin as a percentage of Sales	$\frac{\text{Operating Income}}{\text{Sales}} * 100$
Return on Sales	$\frac{\text{Net Income}}{\text{Sales}} * 100$
Return on Equity (ROE)	$\frac{\text{Net Income}}{\text{Average Shareholder's Equity}} * 100$
Asset Turnover	$\frac{\text{Sales}}{\text{Average Total Assets}}$
Return on Assets (ROA)	$\frac{\text{Operating Income}}{\text{Average Total Assets}} * 100$
Earnings per share (EPS)	$\frac{\text{Net Income}}{\text{Avg Common Shares Outstanding}}$

We need the following information to calculate the profitability ratios.

Item	Source	Value
Gross Profit	Income Statement	34,750
Sales	Income Statement	118,000
Operating Income	Income Statement	16,050
Net Income	Income Statement	8,280
Shareholder's Equity (current yr)	Balance Sheet	52,480

Shareholder's Equity (previous yr)	Balance Sheet	45,400
Total Assets (current yr)	Balance Sheet	99,830
Total Assets (previous yr)	Balance Sheet	94,300
Avg Common Shares Outstanding	Annual Report	3,000

When we look at an income statement it is natural to first look at the bottom line to see if the company is "profitable". A positive net income is certainly good, but more information is needed to really understand the company. After net income, the next item to consider is gross profit as a percentage of sales. RSC is making $34,750 in gross profit on $118,000 in sales. The gross profit is,

Gross Profit as a percentage of sales = 34,750 / 118,000 * 100 = 29.4%

The gross profits give us an indication of the ability of the company to cover operating expenses. Next, we need to look at the profit remaining after covering operating expenses, which is the operating margin. For RSC, the operating margin is,

Operating Margin as a percentage of sales = 16,050 / 118,000 * 100 = 13.6%

After covering the operating expenses, RSC still has 13.6% of its sales left to cover interest expense, taxes, and to provide a profit. The profit, or return on sales is,

Return on Sales = 8,280 / 118,000 * 100 = 7.0%

RSC is making a profit of 7.0% on its sales. Investors need a method to compare various investments and the obvious method is to look at the return they can make on their investment. The return on equity is a good comparison,

Return on Equity (ROE) = 8,280 / (52,480+45,400)/2 * 100 = 16.9%

The ROE is 16.9%, which is excellent. This return is generally better than the stock market average and is certainly better than investing in bonds or demand accounts.

Another measure of the effective utilization of assets is the asset turnover ratio. This ratio compares the sales of the company to the average assets employed. Higher ratios generally indicate better utilization of the assets. However, companies with high gross profit margins, such as RSC, frequently have lower asset turnover ratios. For RSC, the asset turnover is,

Asset Turnover = 118,000 / (99,830+94,300)/2 = 1.21

Return on operating assets is similar to ROE, except that the operating income is used and the entire asset base of the company is used instead of just the equity portion. Operating income, which is called earnings before interest and taxes (EBIT), divided by total assets gives lenders a view of how well the company is employing capital to generate income. This calculation is sometimes referred to as return on operating assets.

Return on Assets (ROA) = 16,050 / (99,830+94,300)/2 * 100 = 16.5%

Earnings per share (EPS) is an almost universal measure of profitability for companies. It is found by dividing the net income of the company (less any preferred dividends) by the average number of shares of stock outstanding. The EPS calculation can be quite complex if there unusual stock transactions such options and warrants are present. Since RSC has not issued any preferred stock the calculation is just the net income divided by the number of shares outstanding. For RSC the earnings per share are,

Earnings per Share = 8,280 / (3,000+3,000)/2 = $2.76 per share

The EPS ratio shows us that the company is making $2.76 for each share of common stock issued. This value should be compared to other time periods to get idea of the financial status of the company.

The next group of ratios looks at the short term liquidity of the company. Short term liquidity is defined as the ability of the company to make current payments as they become due. Four important short term liquidity ratios are shown in the table below.

Short Term Liquidity Ratios	
Current Ratio	$\frac{\text{Current Assets}}{\text{Current Liabilities}}$
Quick Ratio	$\frac{\text{Cash + Mkt Securities + Receivables}}{\text{Current Liabilities}}$
Average Collection Period	$\frac{\text{Average Accounts Receivable * 365}}{\text{Sales}}$
Inventory Turnover	$\frac{\text{Cost of Goods Sold}}{\text{Average Inventory}}$

For the short-term liquidity ratios we need,

Item	Source	Value
Current Assets	Balance Sheet	60,480
Current Liabilities	Balance Sheet	26,350
Cash	Balance Sheet	2,480
Marketable Securities	Balance Sheet	0
Accounts Receivable (current yr)	Balance Sheet	24,400
Accounts Receivable (previous yr)	Balance Sheet	22,750
Sales	Income Statement	118,000
Cost of Goods Sold	Income Statement	80,250
Inventory (current yr)	Balance Sheet	27,000

Inventory (previous yr) Balance Sheet 27,750

The first short term liquidity ratio is the current ratio. The current ratio is simply the ratio of the current assets on the balance sheet to the current liabilities on the balance sheet. It stands to reason that the higher the current ratio, the more likely the company will be able to cover the current liabilities. Related to current assets is a term known as working capital. The difference in current assets and current liabilities is known as the working capital of the company. Investors generally like to see a good margin in working capital and they use the current ratio to analyze the working capital. Just about any company will want to have a current ratio above 1.0 (Some companies, regulated utilities are an example, will frequently have ratios below one. This is acceptable since they are in a stable, regulated market, with guaranteed rates of return.)

Current Ratio = 60,480 / 26,350 = 2.3.

RSC has a current ratio of 2.3, which is a comfortable margin above the current liabilities. A very high current ratio is not necessarily good though. It may mean a company is carrying too much inventory or is not converting accounts receivables into sales. Another related ratio is the quick ratio. The quick ratio is a current ratio that only considers that items that can be quickly converted into cash such as cash, marketable securities, and accounts receivable. Items such as inventories, which may take some time to sell, and prepaid expenses, are excluded from the quick ratio calculation.

Quick Ratio = (2,480 + 24,400) / 26,350 = 1.02

Like the current ratio, a quick ratio of one or greater is considered good. The average collection period is a measure of how long it takes the company to turn accounts receivable into cash.

Average Collection Period = ((24,400+22,750)/2) * 365 / 118,000 = 73 days

Like most of these ratios, whether 73 days is a good average collection period or not is dependent on the industry and the trends in the company. If the ratio is increasing, then the company may not be converting receivable to cash fast enough, or sales may be falling.

A measure of how well a company is managing its inventory is the inventory turnover ratio. The ratio compares the cost of goods sold during a period to the average inventory shown on the balance sheet. For RSC, the inventory turnover is,

Inventory Turnover = 80,250 / (27,000 + 27,750)/2 = 2.93

The inventory turnover ratio is industry specific. Grocery retailers will likely expect a turnover of 15 or greater, while a jewelry store retailer may be satisfied with a turnover of 2.0 or less. For durable goods companies such as RSC, the turnover should be five or more.

The next group of ratios concerns the long term solvency of the company. These ratios look at the debt of the company and the ability of the company to repay debt.

Long Term Solvency Ratios	
Debt to Assets	**Total Liabilities / Total Assets**
Debt to Equity	**Total Liabilities / Shareholder's Equity**
Times Interest Earned Ratio (TIER)	**Operating Income / Interest Expense**
Note: Operating Income is before interest and taxes.	

The long term solvency ratios require the following data,

Item	Source	Value
Current Liabilities	Balance Sheet	26,350
Long Term Liabilities	Balance Sheet	21,000
Total Assets	Balance Sheet	99,830
Shareholder's Equity	Balance Sheet	52,480
Operating Income	Income Statement	16,050
Interest Expense	Income Statement	2,500

The first ratio in this group is debt to assets. This ratio compares the total liabilities of the company to the total assets. It is a measure of how much of the assets of the company are made up of debt. The total liabilities include the current liabilities and the long term liabilities. Therefore, the total liabilities are 26,350 + 21,000 = 47,350. For RSC, the debt to assets ratio is,

Debt to Assets = 47,350 / 99,830 = 0.47

It is not unusual to see the debt to assets ratio of retail companies of up to 0.60, so RSC's debt to assets appears reasonable. Another useful measurement is how much debt the company is carrying compared to the shareholder's equity. The debt to equity ratio will let us measure the mix of debt and equity utilized by the company.

Debt to Equity = 47,350 / 52,480 = 0.90

Generally, the debt to equity ratio should be less than one. Another useful ratio is the times interest earned ratio, which is also called interest coverage. It shows the ability of a company to pay its interest expense based on the income of the company.

TIER = 16,050 / 2,500 = 6.42

For RSC, the TIER is 6.42, which says the company earned more than six times what it needed to cover its interest payments. Bond holders generally will expect a TIER of three or greater.

The last group of ratios concerns the market price and dividends of the company. There are three ratios we will consider: PE ratio, dividend yield, and dividend payout.

Dividend Ratios	
Price – Earnings Ratio (P/E)	**Stock Price / Earnings per Share**
Dividend Yield	**Dividends * 100 / Stock Price**
Dividend Payout	**Dividends * 100 / Earnings per Share**
Notes: 1. The stock price is the market price of a common share of stock. 2. Dividends are dividends per common share.	

Item	Source	Value
Stock Price	Market Value	$26.50 per share
Net Income	Income Statement	8,280
Outstanding Shares	Annual Report	3,000
Dividends	Annual Report	$0.40 per share

The price-earnings ratio (P/E ratio) compares the current market price to the earnings per share of the company. The earnings per share can be the historical earnings or a prospective forward look at the expected earnings. If the EPS is based on past history, it will frequently be noted with the term "ttm" indicating that it is based on the past twelve trailing months. From the profitability ratio we found the earnings per share,

Earnings per Share = 8,280 / (3,000+3,000)/2 = $2.76.

If the current market price is $26.50, then the P/E ratio is,

P/E Ratio = 26.50 / 2.76 = 9.6.

The value of the P/E ratio is somewhat subjective, but generally a higher P/E ratio means investors have confidence in the company's ability to generate profits. Another way to look at the P/E ratio is to use the historical ratios as a method to value the stock. For example, assume that RSC's P/E ratio has remained around 9.6 for several years and the stock price is currently $26.50 per share. If the earnings per share are expected to be $3.00 next year, then an investor may consider the future value of the stock to be $28.80 ($3.00 * 9.6 = $28.80), which would make the current stock price of $26.50 a good buy. Of course, we cannot look at just one ratio to value a company's stock.

Dividend yield is another ratio that is frequently used by investors to determine the value of a company. The Dividend yield calculation gives us the dividend as a percentage of the market price of the stock. The common dividend per share for RSC was $0.40 per share and with a stock market price of $26.50 the dividend yield is,

Dividend Yield = 0.40 / 26.50 * 100 = 1.5%

The dividend yield is 1.5%. Investors who are looking for income would probably expect higher yields, but investors who are looking for growth through capital appreciation will be less concerned about the dividend yield.

The final ratio is the dividend payout ratio. It is the dividend per share divided by the earnings per share. The dividend payout ratio is,

Dividend Payout = 0.40 / 2.76 * 100 = 14.5%.

The dividend payout ratio says that 14.5% of the total earnings were returned to the shareholders through dividends. The remainder of the earnings are held by the company as retained earnings. Growth oriented companies tend to have low dividend payouts and low growth companies in mature industries are more likely to payout more of their earnings in dividends.

VII. Financial Analysis

Now that we have completed the ratios we can analyze the performance of the company. For the purposes of the analysis the financial results of the prior year are also included.

By first looking at the income statement we can see that RSC had a positive net income for both of the past two years, from $7.77 million to $8.28 million. Also, the company's sales increased in 2006 over 2005 from $110 million in 2005 to $118 million in 2006.

When we look at the statement of cash flows we see that the company ended the year with a positive net increase in cash of $680,000. Another positive attribute found on the statement of cash flows is that the cash generated from operations was $9.08 million in 2006, so the company didn't just generate cash by selling assets; it generated cash by selling products. To gain a better understanding of the company's performance, let's look at the following ratios.

Ratio Comparison	2006	2005
Profitability Ratios		
Gross Profit as a percent of Sales	29.4%	27.7%
Operating Margin as a percentage of Sales	13.6%	12.8%
Return on Sales	7.0%	7.1%
Return on Equity (ROE)	16.9%	17.1%
Asset Turnover	1.21	1.17
Return on Assets (ROA)	16.5%	25.9%
Earnings per share (EPS)	$ 2.76	$ 2.59
Short Term Liquidity Ratios		
Current Ratio	2.3	2.1
Quick Ratio	1.02	0.90
Average Collection Period	73	70
Inventory Turnover	2.93	2.80
Long Term Solvency Ratios		
Debt to Assets	0.47	0.52
Debt to Equity	0.90	1.08
Times Interest Earned Ratio	6.42	5.4
Dividend Ratios		
Price – Earnings Ratio (P/E)	9.6	10.0
Dividend Yield	1.5%	0.58%
Dividend Payout	14.5%	5.8%
Note: Sufficient detail has not been provided for the reader to calculate the 2005 ratios.		

In the ratio comparison table shown above we see that the three income ratios, gross profit, operating margin, and return on sales are all good and consistent with the previous year's

performance. For instance, the gross profit from sales in 2006 is reasonable at 29.4%, which is comparable to the previous year, which was 27.7%. The balance sheet ratios, return on equity, asset turnover, and return on assets are very good, with the return on equity in 2006 of 16.9%.

For 2006, the asset turnover ratio is okay at 1.21 and slightly better than the previous years' 1.17. Remember that asset turnover is a measure of how efficient a company is using its assets. Generally a ratio greater than one is considered good, but the best comparison is the trend over several years.

Moving on to the short term liquidity measures we see that the ability to pay bills is pretty good with the current ratio of 2.3. A current ratio of 1.2 or better is generally considered good though it is dependent on the industry. The quick ratio is better than the previous year, but still weak at 1.02. This means that RSC has just barely enough liquid assets to pay its current liabilities. Since the quick ratio is less than the current ratio, the current assets are probably highly dependent on inventory. Therefore, some of the weakness in these values may be the result of excessive inventory or slow collections. The average collection period for RSC is between 70 and 73 days. Most retail companies will have collection period of 30 days or less. The company should probably focus more effort on collections and credit policies. The inventory turnover is okay, but should be slightly higher – probably five or more.

The long term solvency measures appear to be fine. The total debt when compared to the total assets is 0.47, or about one-half of the total assets. If sales slow because of a recession the company is still obligated to pay its interest obligations so the lower debt is better. A ratio debt-to-assets ratio of 0.47 is reasonable. The company is financed with about equal parts of debt and equity with a debt to equity ratio of 0.90 and 1.08 last year. Most companies prefer to keep their debt level below one. The company is in a very strong position to pay its debt since the TIER is 6.42, which means the company has sufficient income to cover its interest payments 6.42 times. Generally a TIER of five or more is considered excellent coverage.

From an investor's viewpoint, the company is doing okay, but not great. The stock price has remained fairly constant, trading between $26.00 and $30.00. The dividend yield, or rate of return on the common stock is only 1.5%, however this is much better than the previous year. And the company is returning more of the retained earnings in the form of dividends this year. In 2006 the dividend payout was 14.5% compared to 5.8% for the previous year. From the statement of retained earnings we can see that even with the increased dividend payout, the company is still increasing its retained earnings, which can be used to fund more growth.

Summary

Everyone in business today should have a fundamental knowledge of the "language of business", which are the financial statements generated by a business. In this course we have looked at how to read and interpret the basic financial statements of a company. It is important to understand financial statements because they provide us with clues about the financial well being of the organization.

We have studied the financial statements of a fictitious company including its balance sheet, income statement, statement of cash flows, and retained earnings to gain a better understanding of commonly used financial terms. From this study we have shown how the various statements are related.

Finally we looked at several key indicators of financial performance to understand the profitability and liquidity of the company.

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