

## Introduction To The Income Statement

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# The Kaplan Group

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Hi. This is Dean Kaplan. The Kaplan Group is a commercial collection agency specializing in debt collection of large business to business claims.

## CREDIT MANAGER SEMINARS



This video series introducing you to financial statement analysis is based on the dozens of training seminars I have given to credit industry groups organized by Dun & Bradstreet, the National Association of Credit Management and Riemer Reporting Services. It is applicable to anyone wanting to learn about this topic, although on occasion I will highlight information from the perspective of credit management.

Cash Flow Statement		Balance Sheet		Income Statement	
For the Year Ended December 31, 2011 (000s)		As of December 31, 2011 (000s)		For the Year Ended December 31, 2011 (000s)	
<b>Cash Flows From Operating Activities</b>		<b>Assets</b>	<b>Liabilities</b>		
Net Income	397	Cash	Accounts Payable	11,892	
Depreciation and amortization		Marketable Securities	Current Portion L-T Debt	9,905	
Unrealized gain on marketable securities				1,987	
Decrease (increase) in deferred income taxes				225	
Net increase (decrease) in receivables				520	
<b>Total Cash Flows From Operating Activities</b>	<b>397</b>			490	
<b>Cash Flows From Investing Activities</b>				<b>Total Operating Expense</b>	<b>1,235</b>
Purchase of machinery, equipment	(1,021)			Operating Profit	752
Proceeds from sale of assets	36			Interest Income	114
Purchases of investments	(152)			Interest Expense	10
Decrease (increase) in investments	1,839			Other Income	25
<b>Total Cash Flows From Investing Activities</b>	<b>(1,021)</b>			Pretax Income	881
<b>Cash Flows From Financing Activities</b>				Income taxes	352
New shares issued	2,332			Income before Extraordinary Items	529
Repayments of debt	(4,171)			Extraordinary Items	(132)
Repayments of preferred stock and other equity	194			Net Income	397
<b>Total Cash Flows From Financing Activities</b>	<b>(1,645)</b>				
<b>Net Increase (Decrease) in Cash and Cash Equivalents</b>	<b>(1,269)</b>				

### 3 FINANCIAL STATEMENTS

In this introduction series, we are providing a simple, basic overview of financial statements and how to analyze them. In this first video, we explain what the income statement is and the information that is presented on it. In the next video, we explain how to analyze the income statement, and in subsequent videos we cover the balance sheet and cash flow statement. The information presented in these videos is also available in a free download, which includes definitions of most terms mentioned in these presentations.



### Statement of Profitability

Profitable  $\neq$  cash flow positive

Profitable  $\neq$  good credit risk

Unprofitable  $\neq$  bad credit risk

## STATEMENT OF PROFITABILITY

The income statement is the statement of the company's profitability during a specific period of time. That period of time may be a month, a quarter, or a year. Profitability is not the same as cash flow which may be more important for credit managers assessing the credit risk of a potential customer. While profitability is important, it is not the only factor to consider when evaluating credit risk. Accounting rules determine how items should be recorded in the financial statements but we will not be getting into the rules in this introductory series.

## INCOME STATEMENT

At the top of the income statement, the first thing you will notice is that it tells you what period the information is for, typically a month, a quarter, or a year. The other key thing at the top of the income statement is to tell you whether the amounts shown are actual dollars, down to the penny, or whether these are truncated numbers. For example, when it says 000's that means we've left off three zeros. Another way to show that is to have the word 'thousands' or even 'millions'. So a number that says 11892 and there's nothing here, then that means \$11,892. But in this example, the three zeros indicate that the numbers shown are in thousands. Therefore the 11892 stands for \$11 million 892 thousand dollars. If it said millions then it would stand for \$11 billion, 892 million dollars—and yes, there are some companies with numbers that big.

### Income Statement

For the Year Ended December 31, 2011 (000s)

Sales	11,892
Cost of Goods Sold	<u>9,905</u>
Gross Profit	1,987
Research & Development	225
Selling Expense	520
General & Administrative Expense	<u>490</u>
Total Operating Expense	<u>1,235</u>
Operating Profit	752
Interest Income	114
Interest Expense	10
Other Income	<u>25</u>
Pretax Income	881
Income taxes	<u>352</u>
Income before Extraordinary Items	529
Extraordinary Items	(132)
Net Income	<u><u>397</u></u>



## SALES AND GROSS PROFIT

Sales	11,892
Cost of Goods Sold	<u>9,905</u>
Gross Profit	1,987

The first item to be reported on the income statement is typically revenue or sales. Next comes cost of goods sold. This is the direct cost of making the products that were sold to generate the revenue reported on the income statement. For example, if this company is a manufacturer of coffee cups, the cost of goods sold represents the amount of money to make all of the cups that were then sold to generate the \$11,892,000 in revenue. This would include the raw materials and the labor that was required to make the cups as well as all of the packaging material, but not items like advertising expenses. When you subtract the cost of goods sold from sales, that gives you what is called the gross profit. This is a very important number because this is the profitability before all of the overhead, and the higher the gross profit, the more profitable the business can be.

## OPERATING EXPENSES

Research & Development	225
Selling Expense	520
General & Administrative Expense	<u>490</u>
Total Operating Expense	<u>1,235</u>
Operating Profit	752

The next section of the income statement is the operating expenses. These are the expenses that the company incurred in order to generate revenue, as well as costs related to investing for future sales. Accounting rules require that operating expenses be divided up into three categories: research and development, selling expense, and general and administrative overhead. Costs incurred to develop the current products as well as new and potential future products are recorded in the research and development category, which often is referred to as R&D. Selling expenses include marketing and advertising costs plus sales people and customer service expenses. General and administrative expenses include expenses for departments such as human resources, legal, and finance. For this company, total operating expenses were \$1,235,000. We then subtract the operating expenses from the gross profit, and that gives us the operating profit. This is one of the most important items in measuring the company's profitability.



## NON-OPERATING EXPENSES

Interest Income	114
Interest Expense	10
Other Income	<u>25</u>
Pretax Income	881

Non-operating income and expenses are items that effect overall profitability but aren't related to the operations of the business. The easiest example is interest income. When the company has extra money available it keeps it in the bank and it earns interest. The amount of interest a company earns has nothing to do with its sales, cost of goods sold, or operations. Therefore, it is a non-operating item. The same can be said for interest expense on any money that the company has borrowed. While this is an expense, and it negatively impacts profitability, it doesn't have anything to do with operations of the business. It has to do with how the business was financed. Other income is a catch-all for all other non-operating income, while temporary changes in the value of assets is also reflected in this section. The non-operating income is added to the operating profit number to arrive at pretax income. If non-operating income is actually a loss, this will show as a negative number on the income statement, and when that negative number is added to the operating profit, it results a smaller amount shown as pretax income.

## NET INCOME

Pretax Income	881
Income taxes	<u>352</u>
Income before Extraordinary Items	529
Extraordinary Items	(132)
Net Income	<u><u>397</u></u>

In the final section of the income statement, we adjust pretax income for other items such as income taxes and extraordinary items. Accounting rules are very specific on what items should be recorded as extraordinary items instead of in operating or non-operating categories. Net Income is calculated by subtracting income taxes from pretax income and adding or subtracting extraordinary items. So in this example, this company made \$397,000 during the prior year on sales of \$11.9 million.



## More Information

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805-541-2639

[inquiry@kgaction.com](mailto:inquiry@kgaction.com)

# Thank You

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The next video in this series is Beginning Income Statement Analysis. Remember, you can download a transcript of this video along with screenshots and definitions to have as a permanent resource. If you found this information valuable, please Share it or Like it. If you need debt collection assistance, we are specialists in large business to business claims and we can refer you to other agencies if your needs do not fit with our expertise. Just fill out the Request A Quote form or give us a call.



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Beginning Income Statement Analysis

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In the prior video, we provided an overview of the income statement. In this video we explain how to do some simple analysis of the information on an income statement.

## INCOME STATEMENT

We are using the same income statement from the last video, but we have now added some line numbers to the left of each row. These numbers are there to help you understand which items we are using in our calculations, and how to do the calculations that end up giving us insights into the income statement.

<b>Line#</b>	<b>Income Statement</b>	
	For the Year Ended December 31, 2011 (000s)	
1	Sales	11,892
2	Cost of Goods Sold	<u>9,905</u>
3	<b>Gross Profit</b>	<b>1,987</b>
4	Research & Development	225
5	Selling Expense	520
6	General & Administrative	<u>490</u>
7	Total Operating Expense	<u>1,235</u>
8	<b>Operating Profit</b>	<b>752</b>
9	Interest Income	114
10	Interest Expense	10
11	Other Income	25
12	<b>Pretax Income</b>	<b>881</b>
13	Income taxes	<u>352</u>
14	Income before Extraordinary Items	529
15	Extraordinary Items	(132)
16	<b>Net Income</b>	<b>397</b>

## GROSS MARGIN

Since the income statement is a measure of profitability, the first thing we want to do is analyze some of the profitability measures. The first one is gross profit, which is the profit the company made on sales after cost of goods sold. We are going to calculate the gross margin to look at profitability as a percentage. The gross margin is calculated by dividing the gross profit of \$1,987,000 by revenue of \$11,892,000 and we see that the gross margin percent is 16.7%. Now whether 16.7% is good or bad is something we can't tell just yet. We'll discuss how to determine if this is good or bad in a moment, but first we will define a few other profitability ratios.

<b>Line#</b>	<b>Income Statement</b>	
1	Sales	11,892
2	Cost of Goods Sold	<u>9,905</u>
3	<b>Gross Profit</b>	<b>1,987</b>

  
$$\text{Gross Margin} = \frac{\text{Gross Profit}}{\text{Sales}}$$
$$\frac{\$1,987}{\$11,892} = 16.7\%$$

( Row 3 ÷ Row 1 )





## OPERATING MARGIN

The second profitability measure to analyze on the income statement is operating profit. We calculate the operating margin by dividing operating profit of \$752,000 by total sales of \$11,892,000, and that shows that the operating margin was 6.3%.

Line#	Income Statement	
1	Sales	11,892
2	Cost of Goods Sold	9,905
3	<b>Gross Profit</b>	<b>1,987</b>
4	Research & Development	225
5	Selling Expense	520
6	General & Administrative	490
7	Total Operating Expense	1,235
8	<b>Operating Profit</b>	<b>752</b>

$$\text{Operating Margin} = \frac{\text{Operating Profit}}{\text{Sales}}$$

$$\frac{\$752}{\$11,892} = 6.3\%$$

$$(\text{Row 8} \div \text{Row 1})$$

## PRETAX MARGIN

The next profitability measure pretax income. To calculate the pretax income margin, we divide pretax income of \$881,000 by sales, of \$11,892,000, and we end up with a pretax margin of 7.4%.

Line#	Income Statement	
1	Sales	11,892
2	Cost of Goods Sold	9,905
3	<b>Gross Profit</b>	<b>1,987</b>
4	Research & Development	225
5	Selling Expense	520
6	General & Administrative	490
7	Total Operating Expense	1,235
8	<b>Operating Profit</b>	<b>752</b>
9	Interest Income	114
10	Interest Expense	10
11	Other Income	25
12	<b>Pretax Income</b>	<b>881</b>

$$\text{Pretax Margin} = \frac{\text{Pretax Income}}{\text{Sales}}$$

$$\frac{\$881}{\$11,892} = 7.4\%$$

$$(\text{Row 12} \div \text{Row 1})$$



## NET PROFIT MARGIN

The final margin that we can calculate on this income statement is the net income margin. We divide net income of \$397,000 by total sales of \$11,892,000 and we have a profitability margin of 3.3%. This 3.3% profit margin means that for every thousand dollars of sales the company generates a profit of \$33.

Line#	Income Statement	
1	Sales	11,892
2	Cost of Goods Sold	9,905
3	<b>Gross Profit</b>	<b>1,987</b>
7	Total Operating Expense	1,235
8	<b>Operating Profit</b>	<b>752</b>
	Non-Operating Income	139
12	<b>Pretax Income</b>	<b>881</b>
13	Income taxes	352
14	Income before Extraordinary Items	529
15	Extraordinary Items	132
16	<b>Net Income</b>	<b>397</b>

$$\text{Net Income Margin} = \frac{\text{Net Income}}{\text{Sales}}$$
$$\frac{\$397}{\$11,892} = 3.3\%$$

( Row 16 ÷ Row 1 )

## EBIT & EBITDA

There are a couple of other very common income statement calculations. One is called EBIT and one is called EBITDA. EBIT stands for earnings before interest and taxes, which essentially is operating profit. EBITDA stands for earnings before interest, taxes, depreciation, and amortization. We will discuss these items in greater detail in our intermediate financial analysis videos, but we wanted to include the definitions and calculations here for your reference.

Line#	Income Statement	
1	Sales	11,892
2	Cost of Goods Sold	9,905
3	<b>Gross Profit</b>	<b>1,987</b>
4	Research & Development	225
5	Selling Expense	520
6	General & Administrative	490
7	Total Operating Expense	1,235
8	<b>Operating Profit</b>	<b>752</b>
9	Interest Income	114
10	Interest Expense	10
11	Other Income	25
12	<b>Pretax Income</b>	<b>881</b>
16	<b>Net Income</b>	<b>397</b>

**Earnings Before Interest & Taxes (EBIT)**  
**Earnings Before Interest, Taxes, Depreciation & Amortization (EBITDA)**

$$\text{EBIT} = 12 - 9 + 10 = \$881 - \$114 + \$10 = \$777$$

$$\text{EBITDA} = \text{EBIT} + 68 = \$777 + \$318 = \$1,095$$



## QUICK SUMMARY OF THE RATIOS

Line#	Income Statement		Summary of Ratios
1	Sales	11,892	
2	Cost of Goods Sold	<u>9,905</u>	
3	<b>Gross Profit</b>	<b>1,987</b>	<b>Gross Margin = <math>3 \div 1 = \\$1,987 \div \\$11,892 = 16.7\%</math></b>
4	Research & Development	225	
5	Selling Expense	520	
6	General & Administrative	<u>490</u>	
7	Total Operating Expense	<u>1,235</u>	
8	<b>Operating Profit</b>	<b>752</b>	<b>Operating Margin = <math>8 \div 1 = \\$752 \div \\$11,892 = 6.3\%</math></b>
9	Interest Income	114	
10	Interest Expense	10	
11	Other Income	25	
12	<b>Pretax Income</b>	<b>881</b>	<b>Pretax Margin = <math>13 \div 1 = \\$881 \div \\$11,892 = 7.4\%</math></b>
13	Income taxes	<u>352</u>	
14	Income before Extraordinary Items	529	
15	Extraordinary Items	<u>(132)</u>	
16	<b>Net Income</b>	<b>397</b>	<b>Net Income Margin = <math>16 \div 1 = \\$397 \div \\$11,892 = 3.3\%</math></b>

So here is a quick summary of the ratios we calculated. The gross margin is 16.7%. After taking into account operating expenses, the operating margin is 6.3%. The pretax margin increases to 7.4% as a result of having some non-operating income. The Net Income margin drops by more than half to 3.3% as a result of taxes and extraordinary items.



## GOOD PERFORMANCE?

**Is 6.3%  
Operating  
Margin good?**

-  **Compare** to competitors
-  **Look** at trends

Now that we've calculated some ratios, we need to do some analysis. For example, is the 6.3% operating margin good? Well we need to be able to compare it to something to determine if it's good or not. The first thing you can do is compare it to other companies doing the same thing. If other coffee cup manufacturers have an operating margin of 15% then clearly this company is not doing something right and the 6.3% is not a good number. However, if other coffee cup manufacturers have an operating profit margin of 2%, then the 6.3% says this company is doing something very special and very good. We explain how to get information on other companies in our Intermediate Financial Statement Analysis series.

Another way to compare the operating margin is to take a look at how this one company has done over time. Is this 6.3% higher than past years (in which case the company is becoming more profitable) or is it lower? Typically we want to compare three years, and sometimes we want to compare quarter to quarter as well as year to year. Whenever we're doing this type of comparison, we are looking for trends and major changes. So if it's relatively consistent that's good, and if it's improving, that's better. But if there are major changes or it's going up and down that means you want to learn more.



## INCOME STATEMENT TRENDS

	<u>2009</u>	<u>2010</u>	<u>2011</u>
<b>Sales</b>	<b>9,132</b>	<b>10,505</b>	<b>11,892</b>
<b>Increase in sales</b>		<b>1,373</b>	<b>1,387</b>
<b>Annual change in sales</b>		<b>15%</b>	<b>13%</b>

**2010 Growth:  $1,373 \div 9,132 = 15\%$**   
**2011 Growth:  $1,387 \div 10,505 = 13\%$**



So let's take a look at the performance of this coffee cup manufacturer over the last three years. We can see that sales were 9.1 million in 2009, increasing to 10.5 million in 2010 and almost 11.9 million in 2011. That looks really good; sales are going up each year. Now when we look at the change in sales we can see that in 2010 revenue increased by 1.37 million and a little more in 2011. So not only is it going up, it's going up each year. But let's look at one other item: the sales growth rate. We can see that the 1.37 million increase in 2010 represents a 15% growth rate over 2009, but in 2011, even though sales went up even more, the growth rate dropped a little bit, down to 13%. In this example, the drop in growth rate is not a huge issue. However, you can see that when you look at information in different ways you get different insights. While everything may look good at first, you may actually find that when you look at it from a different perspective, there are issues of potential concern.



## GROSS MARGIN TREND

	<u>2009</u>	<u>2010</u>	<u>2011</u>
Sales	9,132	10,505	11,892
Cost of Goods Sold	<u>7,310</u>	<u>8,562</u>	<u>9,905</u>
<b>Gross Profit</b>	<b>1,822</b>	<b>1,943</b>	<b>1,987</b>
<b>Gross Profit ÷ Sales</b>	<b>20.0%</b>	<b>18.5%</b>	<b>16.7%</b>

Looking past sales, let's start looking at actual profitability. The first profitability measure is gross profit and the related gross margin. And again, we can see that the gross profit is going up each year, from 1.8 million dollars to \$1.9 million to almost \$2 million, which is a good thing. But let's take a look at the gross margin as a percentage of sales. And in this case, we see that even though total dollar of gross margin was going up each year, the actual percentage, or profitability on sales was going down. Now that could be a key concern. We don't know why the gross margin is down. We don't know if the company is having to lower prices because of competition, or if they can't raise prices as raw material prices go up, or is it an indicator of inefficiency. Either way, the declining gross margin percent is of concern. It would be advisable to compare the gross margin to other coffee cup manufacturers. If everybody else in the industry has a 10% gross margin, then this company is still doing way better than the competition with its 16.7% gross margin, and therefore the decline isn't as much of a concern. However, if most companies have a 35% gross margin, then this company is doing worse than its competition, the trend is negative and this clearly is a big issue of concern.



## OPERATING MARGIN TREND

	<u>2009</u>	<u>2010</u>	<u>2011</u>
Sales	9,132	10,505	11,892
Cost of Goods Sold	<u>7,310</u>	<u>8,562</u>	<u>9,905</u>
Gross Profit	1,822	1,943	1,987
Operating Expenses	<u>880</u>	<u>985</u>	<u>1,012</u>
<b>Operating Profit</b>	<b>942</b>	<b>958</b>	<b>975</b>
Gross Margin %	20.0%	18.5%	16.7%
Operating Costs %	9.6%	9.3%	8.5%
Operating Margin %	10.3%	9.1%	8.2%

Operating Profit ÷ Sales

Now let's take a look at perhaps the most important margin item, which is operating margin. And in this case we again see that operating profit was going up each year by small amounts, but the actual operating margin was going down from 10% to 9% down to 8%. Now we can see that most of this is really driven by the gross margin, which was declining, and that's what's causing the operating margin to decline. In other cases you might see that the gross margin percent was staying the same but operating margin was going down, which means that operating costs as a percentage of sales were going up. This could mean greater investment in R&D, greater costs in sales and marketing expenses, or maybe increases in general overhead expenses.



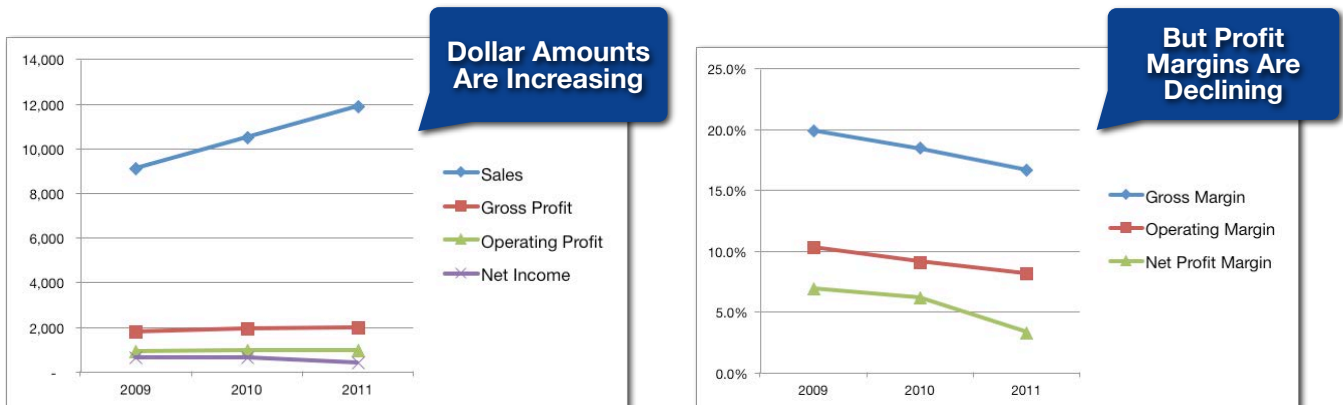
## NET PROFIT MARGIN

	2009	2010	2011
Sales	9,132	10,505	11,892
Cost of Goods Sold	7,310	8,562	9,905
Gross Profit	1,822	1,943	1,987
Operating Profit	942	958	975
<b>Net Income</b>	<b>631</b>	<b>647</b>	<b>397</b>
<b>Net Profit Margin %</b>	<b>6.9%</b>	<b>6.2%</b>	<b>3.3%</b>

**Net Income ÷ Sales**

Finally, we want to take a look at trends with the net profit margin, since this incorporates all profitability measures for the company. We see that it has been steadily declining for this company, with the big drop in 2011 as a result of the extraordinary charge.

## RATIOS PROVIDE INSIGHTS



The basic income statement analysis techniques shown in this presentation reveal a number of insights about this company. While it is profitable and sales have been growing, there are a number of trends that are of concern. The sales growth rate is declining and margins are decreasing. For a credit manager, it means that this company should be reevaluated when additional financial results are available to see if trends are continuing or if management has found a way to improve results.





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**Thank You**

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We will provide more in-depth discussion of income statement analysis in the Intermediate Financial Statement Analysis series. The next video in this introductory series is a high-level explanation of the balance sheet, followed by the Beginning Balance Sheet Analysis video. Remember, you can download a transcript of this video along with screenshots and definitions to have as a permanent resource. You can also download an excel spreadsheet that will calculate these ratios for you when you enter financial statement data into the spreadsheet. If you found this information valuable, please Share it or Like it. If you need debt collection assistance, we are specialists in large business to business claims and we can refer you to other agencies if your needs do not fit with our expertise. Just fill out the Request A Quote form or give us a call.



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Introduction to The Balance Sheet

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805-541-2639



In this presentation, we provide an overview of what a balance sheet is. A balance sheet is a statement of the financial position of a company at a specific point in time. Every company has a balance sheet each day. Typically they are reported at the same time as an income statement, so at the end of a month, the end of a quarter, or the end of a year. But it is for a specific point in time whereas the income statement is for a period of time. Sometimes the balance sheet is referred to as the statement of net worth, because it does show the equity value or net worth of the business.

## BALANCE SHEET

<b>Balance Sheet</b>			
As of December 31, 2011 (000s)			
<b>Assets</b>		<b>Liabilities</b>	
Cash	481	Accounts Payable	625
Marketable Securities	1,346	Current Portion L-T Debt	1,021
Accounts Receivable	1,677	Taxes Payable	36
Inventory	2,936	Accrued Expenses	157
Prepaid Expenses	172	Total Current Liabilities	1,839
Other Current Assets	58		
Total Current Assets	6,670	Long-term Debt	2,332
		<b>Total Liabilities</b>	<b>4,171</b>
Gross Value of Property, Plant & Equipment	2,019	<b>Stockholders Equity</b>	
Accumulated Depreciation	(664)	Common Stock and Paid-in Cap	194
Net Property, Plant, Equipment	1,355	Retained Earnings	4,009
		Total Shareholders' Equity	4,203
Note Receivable	349		
<b>Total Assets</b>	<b>8,374</b>	<b>Total Liabilities and Equity</b>	<b>8,374</b>

Here is a sample balance sheet. The first thing you will notice is that it is as of December 31, 2011, so it shows the amounts on that specific date, and again, it's in thousands of dollars. You will notice that there are two sides to the balance sheet when we present it this way. On the left side is assets and on the right side there are two major categories with bolded titles: liabilities and stockholder equity. The balance sheet needs to balance, and that means the value of total assets, which in this case is \$8,374,000, needs to equal the value of total liabilities and equity, which we see is also \$8,374,000. If a balance sheet doesn't balance, that means there is something wrong with the financial statements.



## CURRENT ASSETS

### Assets

Cash	481
Marketable Securities	1,346
Accounts Receivable	1,677
Inventory	2,936
Prepaid Expenses	172
Other Current Assets	<u>58</u>
Total Current Assets	6,670

Now we are going to look at each section of the balance sheet. First we are going to look at assets, and to start we are going to look at current assets. Current assets are cash, cash equivalents, and any asset that is expected to be turned into cash in the next twelve months. That is what makes an asset a current asset - that it will become cash during the normal course of operations in the coming year. Cash equivalents are financial instruments that can easily be turned in to cash such as certificates of deposits or CDs. Marketable Securities are items like publicly traded stocks and bonds. Accounts receivable are the amounts that are owed to this business from its customers. These are assumed to have very short terms, typically net 30 or net 60 days, and therefore they can be turned into cash within a year and that's why they are a current asset. Inventory includes raw materials, work in process and finished goods and the expectation is that the inventory on a specific date will be sold during the next year and will be replaced with new inventory. Other current assets include prepaid expenses. For example, if you pay your insurance bill at the beginning of the year and it's good for 12 months, most of payment is a prepaid expense for insurance coverage to be provided throughout the year, not just the day the bill was paid. Deposits with utility companies or for short-term leases are also included in other current assets. In this example, the value of current assets is \$6.67 million.



## LONG-TERM ASSETS

Total Current Assets	6,670
Gross Value of Property, Plant & Equipment	2,019
Accumulated Depreciation	<u>(664)</u>
Net Property, Plant, Equipment	1,355
Note Receivable	<u>349</u>
<b>Total Assets</b>	<b><u>8,374</u></b>

After current assets are long-term assets. These are items that have value but are not expected to be turned into cash during the next year in the normal course of operations. In this case we have first, the fixed assets: the company's investment in property, plant, and equipment. Examples include land, buildings and machinery. The cumulative amount originally spent to purchase fixed assets is shown as the Gross Value, which for this company totaled just over \$2 million. Next we show accumulated depreciation expense. Depreciation expense is determined by accounting rules to expense the cost of fixed assets over their useful life. For example the computer on your desk may have cost the company \$1,000 when purchased and this \$1,000 is included in the gross value. The company will have depreciation expense of \$200 a year for 5 years if that is the expected useful life of the computer, and after three years of \$200 depreciation expense annually, the accumulated depreciation would be \$600. The net value of property, plant, and equipment is calculated by subtracting the accumulated depreciation from the gross value. Another long-term asset is a note receivable for \$349,000 that is not due in the next 12 months. If some of the note receivable was due in the next 12 months, that portion would be shown in the current assets category. We take the total of these non-current assets, including the fixed assets, and we add that to the current asset, and that gives us a total value of assets of \$8,374,000.



## LIABILITIES

<b><u>Liabilities</u></b>	
Accounts Payable	625
Current Portion L-T Debt	1,021
Taxes Payable	36
Accrued Expenses	<u>157</u>
Total Current Liabilities	1,839
Long-term Debt	<u>2,332</u>
<b>Total Liabilities</b>	<b>4,171</b>

Now we'll look at the other side of the balance sheet, which has liabilities and stockholder equity, and initially we'll focus on liabilities. Just as with assets, there are current liabilities, those items that need to be paid within the next twelve months, and long term liabilities, or those items that aren't due for more than a year. Typical current items would be accounts payable, the bills from vendors that have not yet been paid, and the current portion of long-term debt. That means any debt that needs to be paid back in the next year. Current liabilities will also include any taxes that aren't paid or other expenses that we know we have to pay but we don't actually have an invoice for yet. These are called accrued expenses. An example of accrued expenses is when you use a law firm, and you know by the end of the month that you owe them money but they haven't sent their invoice yet, so you estimate the amount owed and show that as an accrued liability. Adding up all these current liabilities, also known as short-term liabilities, shows a total of \$1,839,000 for this company. This company also had some long-term debt that does not have to be paid back in the next 12 months, so that's recorded as a long-term liability. We add the long-term liabilities to the current liabilities and we get the total liabilities of \$4,171,000.



## STOCKHOLDERS EQUITY

<b>Total Liabilities</b>	<b>4,171</b>
<b><u>Stockholders Equity</u></b>	
Common Stock and Paid-in Capital	194
Retained Earnings	<u>4,009</u>
Total Shareholders' Equity	4,203
<b>Total Liabilities and Equity</b>	<b><u>8,374</u></b>

The next section of the balance sheet is stockholders equity or shareholders equity. This is the net worth of the company. This is the book value of the company for the people who own it. It is called book value because it is an accounting measure, and not necessarily what the business would actually sell for. Shareholders Equity is made up of two components: the amount of money that was invested in the company by shareholders by purchasing stock and then the retained earnings over the course of the operation of the company. Retained earnings is the net income that is made each year and it keeps adding up. It is reduced when dividends are given to shareholders, since those earnings are no longer retained but are being distributed. Retained earnings will also go down if there is a net loss in any period. So for this company the amount of investment was relatively small—only \$194,000—but over the years they have accumulated over \$4 million in net income as shown in the value of retained earnings. The total shareholder's equity is \$4,203,000. Now as we said before, the balance sheet needs to balance, so we add total liabilities and total shareholder's equity together, which \$8,374,000, and as we saw, this is the same amount as total assets.



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[inquiry@kgaction.com](mailto:inquiry@kgaction.com)

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Beginning Balance Sheet Analysis

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In the prior video, we provided an overview of the Balance Sheet. In this video we are going to explain some easy ways to analyze the balance sheet. We are going to focus on three key areas: liquidity, financial strength, and how well the business is being managed.

## LIQUIDITY



### Company's Ability to Pay

- Payroll
- Inventory
- Capital Equipment

The first area we are going to look at is liquidity. This is essentially how easily can the company pay from existing assets for its ongoing expenses, including payroll, inventory, and investments in capital equipment.

## CURRENT RATIO

AKA Working Capital Ratio

<u>Assets</u>		<u>Liabilities</u>	
20 Cash	481	40 Accounts Payable	625
21 Marketable Securities	1,346	41 Current Portion L-T Debt	1,021
22 Accounts Receivable	1,677	42 Taxes Payable	36
23 Inventory	2,936	43 Accrued Expenses	157
24 Prepaid Expenses	172	44 <b>Total Current Liabilities</b>	<b>1,839</b>
25 Other Current Assets	58	45 Long-term Debt	2,332
26 <b>Total Current Assets</b>	<b>6,670</b>	46 <b>Total Liabilities</b>	<b>4,171</b>

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

$$\frac{\$6,670}{\$1,839} = 3.63$$

( Row 26 ÷ Row 44)

Textbook: 2.0 or higher is good

As with the income statement, the easiest way to analyze a balance sheet is to look at ratios. The first ratio we are going to look at is called the current ratio, and sometimes is referred to as the working capital ratio. It is very easy to calculate. It is simply current assets divided by current liabilities. In this example, that means \$6,670,000 of current assets divided by \$1,839,000 of current liabilities gives you a number of 3.63. The accounting textbooks will tell you that a current ratio 2.0 or higher is an indicator of the company having sufficient liquidity. This is one of the key measures of liquidity.



## QUICK RATIO

<u>Assets</u>	<b>Liquid Current Assets</b>		<u>Liabilities</u>	
20 Cash	481	40	Accounts Payable	625
21 Marketable Securities	1,346	41	Current Portion L-T Debt	1,021
22 Accounts Receivable	1,677	42	Taxes Payable	36
23 Inventory	2,936	43	Accrued Expenses	157
24 Prepaid Expenses	172	44	<b>Total Current Liabilities</b>	<b>1,839</b>
25 Other Current Assets	58	45	Long-term Debt	2,332
26 Total Current Assets	6,670	46	<b>Total Liabilities</b>	<b>4,171</b>

$$\text{Quick Ratio} = \frac{\text{Liquid Current Assets}}{\text{Current Liabilities}}$$

$$\frac{\$481 + \$1,346 + \$1,677}{\$1,839} = 1.91$$

$$(\text{Rows 20} + \text{21} + \text{22}) \div \text{Row 44}$$

Textbook: 1.0 or higher is good

The next ratio we're going to look at is the quick ratio. This excludes some of the current assets that cannot easily be turned into cash, such as inventory. So it's more like extremely liquid current assets, and then this amount is divided by current liabilities. So in this example, the assets that would qualify as liquid current assets include cash, marketable securities, and accounts receivable, and we then divide that by current liabilities and we get a ratio of 1.91. The accounting textbooks basically say a ratio of 1.0 or higher shows adequate liquidity for most companies.



## DEBT TO EQUITY RATIOS

<u>Liabilities</u>		
40	Accounts Payable	625
41	Current Portion L-T Debt	1,021
42	Taxes Payable	36
43	Accrued Expenses	157
44	Total Current Liabilities	1,839
45	Long-term Debt	2,332
46	<b>Total Liabilities</b>	<b>4,171</b>
<u>Stockholders Equity</u>		
50	Common Stock and Paid-in Capital	194
51	Retained Earnings	4,009
52	<b>Total Shareholders' Equity</b>	<b>4,203</b>
53	<b>Total Liabilities and Equity</b>	<b>8,374</b>

### Long-term Debt Equity

$$\frac{\$2,332}{\$4,203} = .55$$

Row 45 ÷ Row 52

### Total Debt Equity

$$\frac{\$1,021 + \$2,332}{\$4,203} = .80$$

(Rows 41 + 45) ÷ Row 52

After evaluating liquidity the next thing to look at is financial strength. The most common ratios to look at here are a couple different debt-to-equity ratios. The first one is long term debt divided by equity, and the other ratio is total debt divided by equity. When we talk about debt here, we are talking about interest bearing debt—that means loans and bank revolving lines of credit. We're not talking about non interest-bearing liabilities, which are also debts, such as accounts payable. And equity, as you recall, is the amount of money that shareholders have invested in the company plus net income that has been earned and retained over the years. When evaluating company strength using debt to equity ratios, the smaller the ratio, the better, as a company is financially stronger the less debt it has compared to equity. However, in many industries, it is normal for debt to be several times the amount of equity, although as that ratio gets higher and higher it begins to be known as 'junk debt' rather than at investment grade. So you can see in the first example the \$2,332,000 of long-term debt is divided by shareholders equity of \$4,203,000 and we get a ratio of .55, which is excellent. When we look at total debt, we've got the short term debt (the current portion of long term debt) at \$1,021,000 and we add that to the \$2.3 million of long-term debt and divide that by the same total equity, and this time the ratio is higher—it's 0.8—but it's still well below 1.0, so the financial strength of this company looks solid.



## INTEREST COVERAGE

### Times Interest Earned

8	<b>Operating Profit</b>	<b>752</b>
9	Interest Income	114
10	<b>Interest Expense</b>	<b>10</b>
11	Other Income	25

### Operating Profit / Interest Expense

$$\frac{\$752}{\$10} = 75.2$$

( Row 8 ÷ Row 10 )

Another indicator of financial strength is interest coverage, also sometimes referred to as times interest earned. Essentially this is operating profit divided by interest expense. Neither of these items is on the balance sheet, they're actually from the income statement. But when you talk about debt-to-equity ratios and the company's debt, it's also important in evaluating financial health to look at the company's current operating profit versus the amount of interest it has to pay its debt holders. Clearly we want the ratio to be above 1 to indicate that operating profit is more than interest expense, and usually something at 5 to 7 is considered very healthy. For this company they have very little interest expense and quite a bit of operating profit, so their interest coverage ratio is extremely healthy.



## RETURN ON EQUITY

Measure profit on equity invested

Income Statement		
16	Net Income	397

Balance Sheet		
50	Common Stock and Paid-in Capital	194
51	Retained Earnings	4,009
52	Total Shareholder's Equity	4,203
53	<b>Total Liabilities and Equity</b>	<b>8,374</b>

**Net Income / Shareholder's Equity**

$$\frac{\$397}{\$4,203} = 9.45\%$$

**( Row 16 ÷ Row 52 )**

Next we are going to measure how efficiently management is running the company. The first ratio we'll look at is return on equity. This is a measure of the company's earnings on the equity that the shareholders have invested. We simply take the net income and divide it by shareholders equity. In this example, \$397,000 of net income divided by \$4,203,000 of shareholders equity gives us a return on equity of 9.45%. In today's market with low inflation and high risk, people are very happy with that 9% return. As with other ratios, it would be good to compare this return on equity to other companies in the same line of business to get a better idea of how well this management team is generating a profit compared to its peers. We discuss how to get information on other companies in the same industry in the Intermediate Financial Statement Analysis series.



## RETURN ON ASSETS

Measure profit on all capital invested

Income Statement		
16	Net Income	397

Balance Sheet		
31	Total Assets	8,374

### Net Income / Total Assets

$$\frac{\$397}{\$8,374} = 4.74\%$$

( Row 16 ÷ Row 31 )

The next efficiency ratio is very similar, but it is return on total assets instead of just shareholders equity. This is a measure of profit on all capital invested in the business which was used to acquire assets. To calculate this, we simply take net income and divide it by total assets. In this example, the net income of \$397,000 is divided by total assets of \$8,374,000 and we get a return on assets of 4.74%. The return on equity ratio is impacted by the debt to equity ratio of the specific company. The return on assets ratio eliminates the impact of the source of financing, regardless if it is debt or equity, to measure management efficiency, and that is why it is good to look at both ratios when comparing companies.



## INVENTORY TURNOVER

### Management of Inventory

#### Income Statement

2	Cost of Goods Sold	9,905
---	--------------------	-------

#### Balance Sheet

23	Inventory	2,936
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### Cost of Goods Sold / Inventory

$$\frac{\$9,905}{\$2,936} = 3.73$$

$$\frac{365 \text{ days}}{3.73} = 108 \text{ days}$$

There are three other efficiency ratios that we can look at to get an idea of how well management is actually managing a few specific very important company assets. The first is inventory turnover. It shows how well they are managing their inventory. One way to calculate this is to simply take costs of goods sold and divide that by ending inventory. In this example, we divide costs of goods sold of \$9,905,000 by ending inventory of \$2,936,000 and the result of 3.73 means that the company sells its inventory 3.73 times a year. Some people prefer to look at this as the number of days that something is in inventory, so to see that we divide 365 days by the 3.73 times inventory turns, and the result 108 days. This means that it takes on average 108 days to sell all inventory. There are several other ways to modify this calculation which is discussed in the intermediate financial statement analysis series. The best way to understand if the resulting number is good or bad is to compare with other companies in the industry.





## ACCOUNTS RECEIVABLES DAYS OUTSTANDING

DSO (Day Sales Outstanding)

How well they manage receivables

Potential Collection Problems

Balance Sheet		
<b>Assets</b>		
22	Accounts Receivables	1,667
<b>Income Statement</b>		
1	Sales	11,892

**Accounts Receivables** x 365  
**Sales**

$$\frac{\$1,667}{\$11,892} \times 365 = 51.5 \text{ days}$$

$$\frac{\text{Row 22}}{\text{Row 1}} \times 365 \text{ days}$$

Another efficiency ratio is Accounts Receivable days outstanding also known as days sales outstanding, which is frequently referred to as DSO. This measures how well management turns sales in to cash and represents how long it takes to collect on sales. The longer it takes, the more working capital is needed to finance the company and it could lead to debt collection problems. It may also be an indicator that management is not focusing on keeping accounts receivable in line, or that they are having to give longer terms or sell to riskier, slower paying customers in order to get sales. To calculate this we simply take the Accounts Receivable balance at the end of the period and divide it by sales for the past year and then multiply that by 365 days. So in this example, we have \$1,667,000 in Accounts Receivable on the balance sheet and divide that by total sales of 11,892,000 and multiply that number by 365. This gives us a result of 51.5 days. For this company, it takes an average of 51 1/2 days to collect on its sales.



## ACCOUNTS PAYABLES DAYS OUTSTANDING

How fast they pay their bills

Balance Sheet		
<u>Liabilities</u>		
40	Accounts Payable	625

Income Statement		
2	Cost of Goods Sold	9,905

$$\frac{\text{Accounts Payable}}{\text{Cost of Goods Sold}} \times 365 \text{ days}$$

$$\frac{\$625}{\$9,905} \times 365 = \mathbf{23 \text{ days}}$$

$$\frac{\text{Row 40}}{\text{Row 2}} \times 365 \text{ days}$$

The final efficiency ratio going to look at is the accounts payable days outstanding. This is an indication of how fast the company pays its bills. For companies thinking about doing business with this company, this is a very important ratio as you want to know how fast you will get paid. To calculate it we simply take the accounts payable balance and divide it by the cost of goods sold and then multiply that by 365 days. The reason we use cost of goods sold instead of sales in this calculation is that payables are associated with costs, not revenues. For companies where costs of goods sold is a small portion of total operating expenses, it may be better to use costs of goods sold plus operating expenses as the denominator in the equation. To calculate the standard ratio for this company, they had \$625,000 in accounts payable outstanding and we divide that by cost of goods sold of \$9,905,000 and then multiply that by 365, and it shows that their days payables outstanding was only 23 days. This means they are a very fast payer. Companies who are thinking about providing credit to this business should feel very comfortable with this number.



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We will provide more in-depth discussion of balance sheet analysis in the Intermediate Financial Statement Analysis series. The next and final video in this introductory series is a high-level explanation Cash Flow Statement. Remember, you can download a transcript of this video along with screenshots and definitions to have as a permanent resource. You can also download an excel spreadsheet that will calculate these ratios for you when you enter financial statement data into the spreadsheet. If you found this information valuable, please Share it or Like it. If you need debt collection assistance, we are specialists in large business to business claims and we can refer you to other agencies if your needs do not fit with our expertise. Just fill out the Request A Quote form or give us a call.



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Introduction to The Cash Flow Statement

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## CASH FLOW STATEMENT

AKA as Sources and Uses Statement



**For the year ended  
December 31, 2011**

**“We can’t pay  
due to cash  
flow problems”**

The final financial statement is the Statement of Cash Flows. It is sometimes referred to as the sources and uses statement, as it shows the sources of cash for the company and then how it was used over a period of time. The time period measured is typically a month or quarter or year. Many people don't focus on the Statement of Cash Flows. They simply want to know if the company is profitable and how strong and liquid it is. Other people will say that the statement of cash flow is the most important statement, because they get paid for what they sell to companies through cash flow. For those in the credit industry, we constantly hear "we can't pay right now because we're having cash flow problems", so understanding cash flow is very important to understanding the company's overall financial health and its operating profitability.



## CASH FLOW STATEMENT

<b>Cash Flow Statement</b>	
For the Year Ended December 31, 2011 (000s)	
<b>Cash Flows From Operating Activities</b>	
Net Income	397
Depreciation and amortization	318
Unrealized gain on marketable securities	(12)
Decrease (increase) in deferred taxes	(44)
Net increase (decrease) in receivables, inventories, prepaids, payables	(97)
<b>Total Cash Flows From Operating Activities</b>	<b>562</b>
<b>Cash Flows From Investing Activities</b>	
Purchase of machinery, equipment, and improvements	(230)
Decrease (increase) in employee advances	(60)
Proceeds from the sale of marketable securities	22
Purchase of marketable securities	(96)
Decrease (increase) in notes receivable	(46)
Decrease (increase) in deposits	(17)
<b>Total Cash Flows From Investing Activities</b>	<b>427</b>
<b>Cash Flows From Financing Activities</b>	
New short-term borrowings	0
Repayment of short-term borrowings	(1,021)
Repayment of long-term borrowings	0
<b>Total Cash Flows From Financing Activities</b>	<b>(1,021)</b>
<b>Net Increase in Cash and Cash Equivalents (886)</b>	
Cash and Cash Equivalents, Beginning	1,367
Cash and Cash Equivalents, Ending	481

The cash flow statement is broken into three categories and then a final summary section. The three categories are cash flows from operating activities, cash flows from investing activities, and cash flows from financing activities. Once these cash flows are calculated, they are added together to arrive at net cash flow, and then this is added to the cash balance at the beginning of the period to calculate the cash balance at the end of the period. We will now review each of these sections.



## CASH FLOWS FROM OPERATING ACTIVITIES

### Cash Flows From Operating Activities

Net Income	397
Depreciation and amortization	318
Unrealized gain on marketable securities	(12)
Decrease (increase) in deferred taxes	(44)
Net increase (decrease) in receivables, inventories, prepaids, payables	(97)
<b>Total Cash Flows From Operating Activities</b>	<b>562</b>

The first section of the cash flow statement is cash flows from operating activities, which is the key measure on the company's core business activities. We normally think the primary source of cash flow from operations is the company's net income. However, net income is a profitability measure, not a cash measure, so we need to make adjustments for various non-cash items on the income statement.



**\$1,000 computer having depreciation expense of \$200 per year**

For example, when the company purchases equipment they do not expense the full purchase price in the year that it was purchased. Instead, it is depreciated over the useful life of the asset. In the balance sheet video, we talked about a \$1,000 computer having depreciation expense of \$200 per year. This depreciation expense is an accounting calculation and not an actual cash expense, so depreciation expense included in the income statement is added back to net income.

Another example of a non-cash income or expense item is unrealized gains or losses on assets. The fact that they are unrealized means we are recognizing their change in fair market value on the income statement but the company has not actually sold the asset so this is an accounting entry and not a cash transaction.



## CASH FLOWS FROM OPERATING ACTIVITIES

### Cash Flows From Operating Activities

Net Income	397
Depreciation and amortization	318
Unrealized gain on marketable securities	(12)
Decrease (increase) in deferred taxes	(44)
Net increase (decrease) in receivables, inventories, prepaids, payables	(97)
<b>Total Cash Flows From Operating Activities</b>	<b>562</b>

### Calculating Cash Flow Impact From Changes in Operating Assets & Liabilities

	2010	2011	Change	Impact on Cash Flow
<b>Assets</b>				
Accounts Receivable	1,531	1,677	146	(146)
Inventory	2,863	2,936	73	(73)
Prepaid Expenses	317	172	(145)	145
Other Current Assets	74	58	(16)	16
<b>Liabilities</b>				
Accounts Payable	577	625	48	48
Taxes Payable	114	36	(78)	(78)
Accrued Expenses	166	157	(9)	(9)
Net increase (decrease) in receivables, inventories, prepaids, payables				(97)

The net income amount also does not take into account changes in the value of the company's operating assets and liabilities. Changes in these accounts have an impact on cash flow. For example, sales are recorded on the income statement, but any sales not yet collected are shown as accounts receivable on the balance sheet. If the amount of accounts receivable goes up during a year, the amount of the increase represents cash that was earned but not yet collected. Therefore, the increase needs to be subtracted from Net Income to arrive at actual cash flow. This same type of adjustment needs to be made for all other operating assets and liabilities. To do this, we need to calculate the change during the period in the amounts of such operating items as inventory, prepaid expenses, accounts payable and accrued expenses. Increases in operating assets result in a cash use or reduction in cash flow, while decreases in operating assets result in a cash source or increase in cash flow. These increases and reductions are reflected on the cash flow statement in this section to arrive at a final number representing cash flow from operating activities.





## CASH FLOWS FROM INVESTING ACTIVITIES

### Cash Flows From Investing Activities

Purchase of machinery, equipment, and improvements	(230)
Decrease (increase) in employee advances	(60)
Proceeds from the sale of marketable securities	22
Purchase of marketable securities	(96)
Decrease (increase) in notes receivable	(46)
Decrease (increase) in deposits	(17)
<b>Total Cash Flows From Investing Activities</b>	<b>427</b>

The next section of the cash flow statement is sources and uses of cash from investing activities. There are two types of investing activities. One is the purchase of equipment and fixed assets by the company. This investment is a cash use or outflow and is not reflected on the income statement. So, to capture the cash use that resulted in purchasing the \$1,000 computer in our example, that cash outflow is reflected here.

### Cash Flows From Investing Activities

Purchase of machinery, equipment, and improvements	(230)
Decrease (increase) in employee advances	(60)
Proceeds from the sale of marketable securities	22
Purchase of marketable securities	(96)
Decrease (increase) in notes receivable	(46)
Decrease (increase) in deposits	(17)
<b>Total Cash Flows From Investing Activities</b>	<b>427</b>

The other type of investing activity has to do with money invested in financial instruments, such as loans to employees, deposits paid to landlords and utility companies, and amounts recorded as notes receivable. Any increase in the amounts of these items during a period would be a use of cash, while any decrease would result in a cash inflow. All these changes are reflected in this section of the cash flow statement to get a net cash increase or decrease from investing activities.



## CASH FLOWS FROM FINANCING ACTIVITIES

### Cash Flows From Financing Activities

New short-term borrowings	0
Repayment of short-term borrowings	(1,021)
Repayment of long-term borrowings	<u>0</u>
<b>Total Cash Flows From Financing Activities</b>	<b>(1,021)</b>

The next section of the cash flow statement is sources and uses from financing activities. In most cases, financing of the business is unrelated to the company's operating performance. In this section, any new borrowings or sales of stock are shown as cash sources. Any repayment of debt, purchase of company stock, or dividends would be shown as cash uses. These are all added to come up with a net cash increase or decrease from financing activities.

## CASH FLOW SUMMARY

<b>Net Increase in Cash and Cash Equivalents</b>	<b>(886)</b>
Cash and Cash Equivalents, Beginning	1,367
Cash and Cash Equivalents, Ending	481

The final section of the cash flow statement is the summary. This is the summation of cash flows from operating, investing and financing activities. This particular company had a decrease in cash and cash equivalents of \$886,000 over the last year. While initially this might be alarming, we can see that they repaid over \$1 million of debt, so this negative cash flow is not a concern as long as other company ratios indicate sufficient liquidity and strength. The summary section then shows the cash balance at the beginning of the period and at the end. In this case, there was \$1,367,000 at the beginning and after using \$886,000 in cash there was \$481,000 at the end.



## PROFIT VS. CASH FLOW

### **Cash Flow Statement**

For the Year Ended December 31, 2011 (000s)

#### **Cash Flows From Operating Activities**

Net Income	397
Depreciation and amortization	318
Unrealized gain on marketable securities	(12)
Decrease (increase) in deferred taxes	(44)
Net increase (decrease) in receivables, inventories, prepaids, payables	(97)
<b>Total Cash Flows From Operating Activities</b>	<b>562</b>

#### **Cash Flows From Investing Activities**

Purchase of machinery, equipment, and improvements	(230)
<b>Cash Flows Operating Activities After Purchases</b>	<b>332</b>

The cash flow statement does not lend itself to some of the same easy ratio analysis that we discussed for the income statement and balance sheet. However, there are certain things that we want to focus on. A key item is comparing profitability versus operating cash flow. If they are vastly different, a credit manager evaluating credit risk will want to understand the reasons and how this might impact the company's ability to pay invoices. The cash flow from operations less the cost for new equipment allows us to compare operating cash flow versus net income



## PROFIT VS. CHANGES IN WORKING CAPITAL

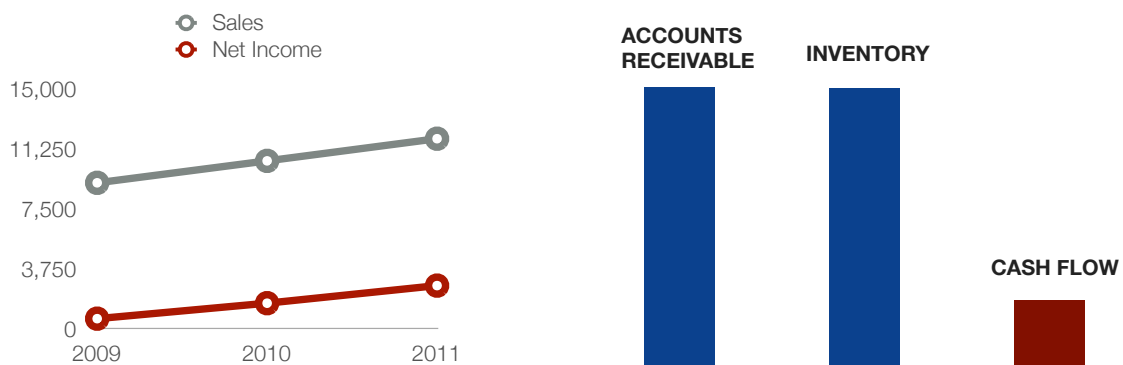
### Cash Flow Statement

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Another key issue is the change in working capital and therefore the cash required to operate the business. This is especially relevant for growing businesses.



Sales and profit may be increasing, but cash flow may be negative due to the investments required to fund and achieve the growth. Sales people are always justifiably excited about the prospect of selling to fast growing companies, but credit managers need to make sure these customers have sufficient financial capital available to fund the growth. If they don't, you can expect that they will be slow in paying their vendors during these periods of high growth. Essentially, vendors become lenders in this situation, so careful credit analysis is required.



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This completes the series introduction to financial statements. Remember, you can download a transcript of this video along with screenshots and definitions to have as a permanent resource. You can also download an excel spreadsheet that will calculate these ratios for you when you enter financial statement data into the spreadsheet. If you found this information valuable, please Share it or Like it. If you need debt collection assistance, we are specialists in large business to business claims and we can refer you to other agencies if your needs do not fit with our expertise. Just fill out the Request A Quote form or give us a call.



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## Definitions

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**A**

**Accounts Payable Days Outstanding (AP DSO):**

Accounts Payable divided by (Cost of Goods Sold plus Operating Expenses excluding depreciation and amortization) multiplied by 365.

**Accounts Receivable Days Outstanding (AR DSO):**

Net (of bad debt reserve) Accounts Receivable divided by Net Sales multiplied by 365.

**Accounts Receivable Turnover:** Net sales divided by accounts receivable. May also use average accounts receivable which is calculated by adding beginning net accounts receivable and ending net accounts receivable and dividing by 2.

**Amortization Expense:** The cost of Intangible Assets is recorded on the Balance Sheet when incurred and then expensed (written-off) over time (the assets useful life). Amortization expense is recorded on the income statement for the accounting period, but there is no cash outflow associated with this expense.

**Audited Financial Statements:** See Standard of Preparation.

**B**

**Balance Sheet:** Also called the Statement of Financial Position or Financial Condition. It reports an entity's financial condition (assets, liabilities and equity) at a single point in time.

**C**

**Compilation:** See Standard of Preparation.



**Cost of Goods Sold:** The cost of purchasing raw materials plus the cost of manufacturing products.

**Current Assets:** Assets that can be converted to cash in less than one year. Current assets are important to companies as a source of funds for operations. Current assets include cash, marketable securities, accounts receivable, inventory, and prepaid expense and are reported on the Balance Sheet.

**Current Liabilities:** All money owed by the company within the next year of the date of the Balance Sheet. Includes accounts payable, accrued expenses, taxes payable, and short-term debt and is reported on the Balance Sheet.

**Current Ratio:** Current Assets divided by Current Liabilities. Also known as the Working Capital Ratio. It is a key measure of liquidity.

D

**Debt to Equity Ratio:** The total of all 'interest-bearing' Debt (short-term, long-term, capital leases, off-balance sheet financing) divided by Total Equity. May also calculate Debt to Tangible Equity (Net Worth). Non-interest bearing liabilities (e.g. accounts payable, customer deposits, deferred revenue, deferred taxes, etc.) are not included in the calculation of Debt.

**Depreciation Expense:** The cost of capital assets (such as equipment, furniture and leasehold improvements) is recorded on the balance sheet when incurred and then expensed (written-off) over time (their useful life). This write-off is called depreciation, and is recorded on the income statement for the accounting period. There is no cash outflow associated with this expense.





**E** **EBIT:** Earnings before Interest and Taxes. It is an alternative measure of operating profit. Calculate by taking Pretax Income and subtracting interest income and adding interest expense.

**EBITDA:** Earnings Before Interest Taxes Depreciation and Amortization. It is a measure of cash flow generated by the company, excluding investment and financing activities. Calculate by taking EBIT and adding back depreciation and amortization expense.

**EBITDA Margin:** EBITDA divided by Net Sales. Expressed as a percentage.

**Equity:** See Shareholders Equity.

**Extraordinary Items:** What qualifies as an extraordinary item is determined by GAAP. Extraordinary items are reported separate from the other income and expense items on the Income Statement because they are non-recurring. It is shown after the calculation of pre-tax income.

**G** **GAAP:** Generally Accepted Accounting Principals. It is the set of rules, standards, conventions and procedures in the U.S. for reporting financial information. The Financial Accounting Standards Board (FASB) determines GAAP.

**Gross Margin:** Gross Profit divided by Net Sales. Gross Profit is Net Sales minus Cost of Goods Sold. A key financial management statistic and used to compare against competitors. Expressed as a percentage.



**Gross Profit:** Revenue (sales) less Cost of Goods Sold.

I

**Inventory Days:** The number of days of inventory maintained by the company. Calculate by dividing Inventory by Net Sales and multiply by 365. May also use average inventory in the calculation, which is calculated by adding beginning net inventory and ending net inventory and dividing this sum by 2.

**Inventory Turnover:** This represents the number of times per year the company sells its inventory and is a measure of how efficient a company is in utilizing inventory. Calculate by dividing Net Sales by Inventory. May also use average inventory in the calculation, which is calculated by adding beginning net inventory and ending net inventory and dividing this sum by 2.

**Income Statement:** Reports revenues, expenses, gains, losses, and the resulting net income or loss and thus summarizes a company's earnings performance during an accounting period.

N

**Net Income:** All revenue and income minus all expenses. Also referred to as the bottom line.

**Net Income Margin:** Net Income divided by Net Sales. Expressed as a percentage.

**Net Worth:** See Shareholder's Equity.



**O** **Operating Income (Profit):** Profit generated from operations. It excludes non-operating activities such as the financial impact of financing activities and disposing of assets. Calculated as Gross Profit minus operating expenses. Similar to EBIT.

**Operating Margin:** An important profitability measure. Operating Income divided by Net Sales. Similar to EBIT margin. Expressed as a percentage.

**Q** **Quick Ratio:** (Cash + Short-term marketable Securities + Net short-term receivables) divided by total current liabilities. Excluded from the numerator are inventories, prepaid items, and similar comparatively non-liquid current assets.

**P** **Pretax Income:** Income before taxes and extraordinary items. Calculated by subtracting from Sales all expenses except income taxes and extraordinary items. Useful when income tax liability fluctuates (for example, when net operating loss carry-forwards and carry-backs are available) or extraordinary items are recorded.

**Pretax Margin:** Pretax Income divided by Net Sales. Expressed as a percentage.

**R** **Return on Assets (ROA):** A measure of a company's profitability, it is calculated by dividing Net Income by Total Assets. Expressed as a percentage.



**Return on Equity (ROE):** Net Income divided by Total Shareholders Equity. This is a general measure of a company's efficiency and success at generating profits on the capital invested by shareholders. Expressed as a percentage.

**Reviewed Financial Statements:** See Standard of Preparation.

**Robert Morris Associates:** Collect and publish financial metrics and ratios by industry for comparison purposes.

S

**Shareholders Equity:** The amount invested by shareholders (when they purchase shares from the company) plus earnings (e.g. net income) retained by the company since the company's start. Cash dividends paid to the shareholders by the company reduces retained earnings. Also known as Net Worth.

**Standard of Preparation:** The standard to which financial statements have been prepared. Certified Public Accountants (CPA) can prepare at three different levels: compilation, reviewed, audited. Compiled statements have received almost no authentication by the CPA. Reviewed statements include substantial analysis by the CPA. Audited statements have received extensive authentication by the CPA, are prepared according to GAAP, and included notes. The notes can be as important as the statements. Some externally prepared financial statements are not completed to any of these standards and there is no assurance that the numbers are accurate, representative, or prepared in accordance with GAAP.



**Statement of Cash Flows:** Summarizes cash inflows and outflows from operating activities, investing activities, and financing activities during an accounting period.

T

**Tangible Net Worth:** Total Shareholders Equity (e.g. Net Worth) according to GAAP reduced by the value of intangible assets recorded on the Balance Sheet.

**Times Interest Earned.** It is a measure of a company's credit worthiness. It is calculated by dividing EBIT by Interest Expense.

W

**Working Capital:** A measure of liquid assets a company has to build its business. Working capital equals Current Assets minus Current Liabilities.

**Working Capital Ratio:** See Current Ratio.