

This is more of an art than science. How you interpret the ratios is very important. Our interpretation should not simply be what an individual ratio tells us but what they tell us from a larger perspective about this company's management philosophy, its management practices. That is what we hope to gain from this analysis.

The **Financial Statement Analysis** is the result of a compilation of different ways of looking at a company.

The analysis sheet has 6 sections.

1	Operational & Net Profitability
2	Working Capital and Liquidity Management
3	Long Term Capital Structure
4	Propensity for Reinvestment
5	Cash Management Practices
6	Return to Stockholders

The first, **Operating and Net Profitability**, is the heart.

1-A, Sales Trends:

For a company which is in the market place it is important to understand if their sales are inclining or declining. We want to know what year over year increases the company is experiencing are a percentage standpoint using their first year as a base. In this case their first year sales were \$4100. We can't compare it to the year 200 data because we do not have it so it gets a big N/A.

The second year we can compare the 7191 over the 4100 giving us a 75% increase.

$$\frac{7191}{4100} - 1 = 75\% \quad \text{and the second year:} \quad \frac{10866}{7191} - 1 = 51\%$$

Sales increased 75% in 2002 and 51% in 2003. Good that sales is increasing each year but the rate of increase is actually declining. A toss up in terms of strength or weakness.

1-B, Cost of Goods Sold as % of Sales (COGS/Sales)

Trying to understand how much it is costing them, as a percent of what they are getting in the way of sales, to make this product(s). What is the cost of manufacturing as a percent of sales.

$$\begin{array}{l} \text{Year 1: } \frac{2905}{4100} = 70.9\% \\ \text{Year 2: } \frac{5493}{7191} = 76.4\% \\ \text{Year 3: } \frac{8139}{10866} = 74.9\% \end{array}$$

(This just looks at operating sales. Does NOT consider GAIN ON SALE OF ASSETS which is considered non-operational. Gain on Sales of Assets is more of an investing activity.)

What are these percentages saying to us? How do we interpret these numbers?

In 2002 vs 2001 they were spending more as a percent of sales to make the product than they did in 2001. Their costs as a percent of sales have gone up. But then this cost went down a little in

2003. Still, 70 plus percent in cost as a percent of sales is a negative. Even if we make the argument that sales increased we have to conclude that increased volume should result in decreased per unit costs. And in 2003 the costs are still higher than they were in 2001. Rate this increase as a weakness.

A key point here (for take home exam) is that the increase in sales in both 2002 and 2003 have not translated to a decrease in per unit costs. This is the Gross Profit Margin which is declining. There are two possible explanations for this trend.

- 1) costs of raw materials are going up.
- 2) sale price could be going down (due to competition).

Notice that in our analysis we do not have the information on Industry Standard. In this way we are not able to understand what is going on in that industry and make a comparison.

There are two types of analysis:

- **Bench Mark Analysis** where we compare against a benchmark of other similar companies of similar size and similar industry.
- **Trend Analysis**, where we look at the trends.

Given the information we have here we will only be able to do trend analysis. We will only consider trend analysis in this class. Note that the industry standard changes each year so we actually should have an industry standard column in each year to compare against. Then we could compare the trend in the industry to the trend of the company.

Also, when reviewing a case, if you lose objectivity and start to speculate and read reasons into the data you risk losing the points the case is trying to make.

1-C, Operating Expense as % of Sales (SG&A / Sales)

Here we have something very interesting. Another kind of cost, operating expenses as a percent of sales.

$$\begin{array}{l} \text{Year 1: } \frac{699}{4100} = 17.0\% \\ \text{Year 2: } \frac{837}{7191} = 11.6\% \\ \text{Year 3: } \frac{1235}{10866} = 11.4\% \end{array}$$

Here we see that SG&A costs as a percent of sales are going down. This is a good thing! Rate this one a strength.

1-D, Operating Profit as % of Sales

REMEMBER:

$$\frac{\text{Sales} - \text{COGS} - \text{SG\&A}}{\text{Sales}} = \frac{\text{Sales}}{\text{Sales}} - \frac{\text{COGS}}{\text{Sales}} - \frac{\text{SG\&A}}{\text{Sales}} = 1 - \frac{\text{COGS}}{\text{Sales}} - \frac{\text{SG\&A}}{\text{Sales}}$$

What is this telling us?

100% represents Sales.

COGS/Sales represents Gross Profit.

SG&A/Sales represents SG&A.

So this number represents **OPERATING INCOME** (profit) as a percentage of Sales.

Operating income is the income before taxes, before interest, and before other things like gains and losses on sales of equipment. Operating Income is the real operational profitability of an entity. It just looks at operational things. One number that synthesizes COGS and SG&A with respect to sales.

$$\text{Year 1: } \frac{\text{Sales} - \text{COGS} - \text{SG\&A}}{\text{Sales}} = 12.1\%$$

$$\text{Year 2: } \frac{\text{Sales} - \text{COGS} - \text{SG\&A}}{\text{Sales}} = 12.0\%$$

$$\text{Year 3: } \frac{\text{Sales} - \text{COGS} - \text{SG\&A}}{\text{Sales}} = 13.7\%$$

How should we interpret these numbers? Says in year 3 operating profit increased in spite of some of the numbers we've already calculated.. That's a good thing.

On the whole, when we consider both cost of goods sold and SG&A is actually going up. So we rate this item a strength.

EXAM

We should know that when we deal with operating expenses we are only dealing with Selling, General & Administrative Expenses. We are not considering R&D, Cost of Goods Sold. This is reflected in the formula, SG&A/Sales.

1-E, Net Income as % of Sales

This is net income, the bottom line. (Net Income is provided in the financial statements, not calculated. Just take the ratio.)

$$\frac{\text{Net Income}}{\text{Sales}} = \frac{\text{Year 1}}{5.2\%} \quad \frac{\text{Year 2}}{6.4\%} \quad \frac{\text{Year 3}}{8.0\%}$$

We rate this a strength. Net Income increasing is always good.

1-F, Quality of earnings issues (describe)

This is a new development in the last decade in terms of financial statement analysis. We've been examining the profitability of this company but how do we know there has not been intentional deception in the preparation of the financial statements? This is what we've been seeing lately, Enron, Worldcom, etc.

EXAM

We need to be aware that companies can be deceitful in the preparation of their reports. In terms of evaluating whether or not there are any items in earnings that might damage the Quality of Earnings consider the items in the following list:

- 1) Changes in the assumptions for reserves and allowances of any kind may be a reason to doubt that the earnings are of quality.
- 2) Changes in Descriptive Fixed Costs are another reason to doubt the quality of the earnings.
 - Ex. There are two kinds of fixed expenses
 - a) Committed Fixed Expenses: no choice, must pay, such as tax, insurance. Expenses which you must pay or face serious short term ramifications.
 - b) Discretionary Fixed Expenses: fixed expenses which in fact we have discretion over in regard to how much we are going to spend on them. Examples include R&D, training, repairs and maintenance, capital expenditures, reduce increases in depreciation expense, changes in actuarial assumptions regarding pensions (huge), and the biggest, gains and losses on the sale of assets.
 - c) Gains on Sales of Assets, a way of boosting earnings without real operational profitability.

For example, don't have enough profit for this quarter. One year UTC said they would sell the gold building to the retirement fund. They had bought for \$50 million, pension fund had so much cash it needed to invest. Sell gold building to pension fund for \$75 million and take a gain on the sale of assets for \$25 million. This plan went forward. This made reported earnings a little higher. Afterward, every quarter they would look around for assets to sell to someone within the corporation. Then the pension fund needed some profitability because one year the funding was going to be a lot higher. So the pension fund said we're going to have to sell this asset (gold building) but UTC would not buy it back. So pension fund sold the building to Colonial Reality and they syndicated it. They bought it for \$100 million. Syndicated it for somewhere between

\$125 and \$150 million. At this point interest rates increased and the whole thing folded and all the people who purchased syndicated units ended up losing a lot of money. It was bad.

Now, do we see anything in our income statement which may indicate that these types of problems exist? Examine the Financial Statements.

Perhaps the Gain on Sale of Assets in 2001. We have the potential for some shady practice. R&D drops in 2002 while sales is going up 75%. What up with that?

What percentage of the bottom line, net income, in 2001 was the gain on sale of assets? 47.3%. Almost 50%. This says that in 2001 half of their profitability came from the sale of an asset. That's not really good.

Nothing stands out in 2003.

Overall Operations & Net Profitability should be listed as a STRENGTH. The bottom line, net income, is steadily improving and the final year (2003) is not too much hampered by quality of earnings issues. Although the numbers appear to have unexplained changes which helped earnings and we would like to do further inquiries into the reasons for these entries.

Remember to avoid speculating, do not make up a scenario which explains the questions you have. Stick to the facts of the case.

Does the firm have cash flow problems? Is it managing its working capital well. Is its demand for working capital outstripping its ability to create working capital? That is what section 2 will tell us...

The second, **Working Capital and Liquidity Management**.

2-A, Accounts Receivable - Days Sales O/S

How quickly, efficiently, are they collecting their accounts receivable?

There are two ways of looking at it.

- 1) Accounts Receivable Turnover, abstract, divide accounts receivable into sales and that tells you how many times accounts receivable is turned over.
- 2) How many days of sales are still outstanding.

Sales divided by 365 days gives sales per day. ex.

In 2001 our sales per day are \$11.23 million. Now divide this number into our accounts receivable balance of \$987 million, we get 87.9 days of outstanding accounts receivable. If

their terms are 30 days this would not be a good thing, if there terms are 90 days then everything is OK. Lets look at the trend.

$$\text{Year 1: } \frac{\text{Acct Rec}}{\text{Sales} / 365} = \frac{987}{4100 / 365} = 87.9$$

In 2002 their receivables were 1377 which we divide by their sales of 7191 gives 69.9 days outstanding.

$$\text{Year 2: } \frac{\text{Acct Rec}}{\text{Sales} / 365} = \frac{1377}{7191 / 365} = 69.9$$

In 2003 the receivables were 2287 which we divide by their sales of 10866 divided by 365 works out to 76.8 days outstanding.

$$\text{Year 3: } \frac{\text{Acct Rec}}{\text{Sales} / 365} = \frac{2287}{10866 / 365} = 76.8$$

Again we have a broken trend, not clear. Not all bad, not all good. Went down in 2002 but up in 2003. Has not consistently improved. Rate it a weakness.

2-B, Inventory - Days Sales in Inventory

How many days of supply do we have in inventory. Same basic thing except that we use cost of goods sold. This tells us what our usage of supplies are per day. How many days of supply we have in inventory.

$$2001: \frac{\text{Inventory}}{\text{COGS} / 365} = \frac{834}{2905 / 365} = 104.8$$

$$2002: \frac{\text{Inventory}}{\text{COGS} / 365} = \frac{1123}{5493 / 365} = 74.6$$

$$2003: \frac{\text{Inventory}}{\text{COGS} / 365} = \frac{2005}{8139 / 365} = 89.9$$

Is this good or bad? Depends, we don't really know what the competitors are doing, what industry they are working in (although we are told "hardware"). What is the trend doing? Down then back up. Say it is computer hardware. These would be a lot of days of inventory. In this industry a product can go out of date quickly. The manufacturer may actually be stuck with obsolete inventory no one wants to buy. Just-in-Time practices say you should have sufficient inventory just in time for your demand. To many things could happen with a lot of inventory. Damage, obsolete, etc.

2-C, Accounts Payable / Accrued Liab - Days Payable O/S

How many days of accounts payable are outstanding. This is how much we are incurring in the way of bills

$$\begin{array}{l} \text{Year 1:} \quad \frac{\text{Acct Payable}}{\text{COGS} / 365} = \frac{516}{2905 / 365} = 64.8 \\ \text{Year 2:} \quad \frac{\text{Acct Payable}}{\text{COGS} / 365} = \frac{637}{5493 / 365} = 42.3 \\ \text{Year 3:} \quad \frac{\text{Acct Payable}}{\text{COGS} / 365} = \frac{888}{8139 / 365} = 39.8 \end{array}$$

Good or Bad? Good: we want to hold on to our cash as long as possible, but we are doing so at our suppliers expense. Could make them mad. Bad: compare it to receivables, we have 76.8 days of accounts receivables cash coming in and we're paying out in 39 days (2003). Paying faster than we are getting. Also, is the firm taking advantage of discounts available for early payment? Probably not.

When suppliers are not paid in time they typically do one of three things:

- 1) not sell to you
- 2) sell to you at a higher price
- 3) put you on COD terms (very difficult, slows down the production process)

NOTE:

Accounts Payable and Accrued Liabilities can be added together to get days payable outstanding. (??)

2-D, Current Ratio

Current Assets / Current Liabilities.

In this case we are taking the ratio of current assets and current liabilities.

In 2001 the ratio is $2318/960 = 2.4$. This means they have 2.4 times as many current assets as they have current liabilities. For the 3 years the current ratio is steady. Is this a strength?

Consider what is in current assets. Acct Rec, Cash, and Inventory. All of which are inflated.

Old receivables, bloated inventory. There is some question mark as to whether they should have this ratio of current assets to current liabilities. What is there is an industry change and most of their inventory becomes obsolete? Very Bad.

But it's a plus on the surface so let's stick with that. If we went deeper we may have some concerns.

EXAM

The term Working Capital means Current Assets and Current Liabilities (not the sum).

Net Working Capital means the difference between the two, current assets minus current liabilities.

$$\text{NET WORKING CAPITAL} = \text{CURRENT ASSETS} - \text{CURRENT LIABILITIES}$$

2-E, Quick Ratio

(Error in text, should be cash and accounts receivable only because if we take total current assets and subtract inventory we could end up with things like prepayments in there. Cash and accounts receivable only!)

Quick Ratio says lets forget about inventory. Example, year 1 tells us that we have 1.4 times the cash and accounts receivable than current liabilities.

$$\begin{array}{l} \text{Year 1:} \\ \text{Year 2:} \\ \text{Year 3:} \end{array} \quad \begin{array}{l} \frac{\text{Cash} + \text{Acct Rec}}{\text{Current Liabilities}} = \frac{357 + 987}{960} = 1.4 \\ \frac{\text{Cash} + \text{Acct Rec}}{\text{Current Liabilities}} = \frac{627 + 1377}{1244} = 1.6 \\ \frac{\text{Cash} + \text{Acct Rec}}{\text{Current Liabilities}} = \frac{471 + 2287}{2013} = 1.4 \end{array}$$

This looks like a strength.

2-F, Level of Working Capital

This is the absolute dollar level of net working capital. Doesn't really tell us much.

$$\begin{array}{l} \text{Year 1:} \\ \text{Year 2:} \\ \text{Year 3:} \end{array} \quad \begin{array}{l} \text{Curr Assets} - \text{Curr Liabilities} = 1358 \\ \text{Curr Assets} - \text{Curr Liabilities} = 2047 \\ \text{Curr Assets} - \text{Curr Liabilities} = 3145 \end{array}$$

The net working capital is going up which is a positive thing. But if we looked into it further you would find out that excess amounts of inventory and receivables are the reason it's going up then you may see it as a negative thing.

This looks like a weakness.

2-G, Cash to Cash / Working Capital Cycle

Take days of Accounts Receivable PLUS days Inventory MINUS days Accounts Payable. (2A + 2B - 2C) What does this tell us? They buy something and it sits in inventory for 105 days.

Then they sell it and hold on to that receivable for another 88 days. But 64 days after they buy it

they have to write a check for it. From the time they write that check to the time they get it back in cash is 127.8 days. That's more than 4 months. Look at the other years.

$$\text{Year 1: } 87.9 + 104.8 - 64.8 = 127.9$$

$$\text{Year 2: } 69.9 + 74.6 - 42 = 102.5$$

$$\text{Year 3: } 76.8 + 89.9 - 39.8 = 126.9$$

This is a weakness. This company is not managing its working capital well. Every day that these numbers increase the company's cash flow is hurt very significantly. Let's say their receivables (2A) in 2003 should be 60 days. Let's say they are collecting in 77 days. If their sales in 2003 are 10866 and on a per day basis that would be \$30,000 per day. Multiply by the extra 17 days that means \$506,000 more should be in their bank accounts than actually is. And the reason is they let the receivables hang out there an extra 17 days. That is how important the collection processes are. Can do the same thing with inventory. Example, take cost of goods sold $(8139/365) \times 60$ days excess inventory and we find \$1.337 billion cash which should be in the bank. And the cost is directly related to some inventory manager who has 89 days of inventory when he should have 30.

Profitability is important but cash flow is critical to success. Can afford to miss opportunities due to low cash flow.

Overall, working capital and liquidity management looks like a weakness.

The third, Long Term Capital Structure.

From here on we get into "shades" of valuable things. In this one we are dealing with the debt leverage that this company has. How leveraged is this company, is it overbarrowed? Or does it have a steady level of liability relative to its assets. Assets are things you own, but liabilities and equity are how you paid for the things you own. Either you still owe on them or you've used your own equity to purchase them. Now we are looking at the relationship of their assets and how they were financed.

3-A, Total Liabilities to Total Assets

Here we look at the ratio of total liabilities to total assets.

Year 1:	$\frac{\text{Total Liabilities}}{\text{Total Assets}}$	=	36.2%
Year 2:	$\frac{\text{Total Liabilities}}{\text{Total Assets}}$	=	35.0%
Year 3:	$\frac{\text{Total Liabilities}}{\text{Total Assets}}$	=	40.4%

What does this indicate? It says we are borrowing more money against our assets. This could be good or bad. Don't forget this is total liabilities against total assets. What kind of liabilities could be good liabilities? Accounts Payable is a good liability because we do not pay interest on it. We owe money but haven't paid it yet and we are not being charged for this. We also do not pay anything on Accrued Liabilities as long as we pay them on time. These types of liabilities are good. Bad liabilities include mortgages, notes payable, things we pay interest on every month. What about short term notes payable with floating rate interest? Floating interest generally just sounds like a bad thing. A lot of short term floating interest can put you in a position where you suddenly are faced with rapidly raising rates and you may find yourself in a position where you cannot afford to service the debt. This can actually happen to a profitable company and land them in bankruptcy.

In this case we want to look a little deeper at the structure of their debt and payables and see the type of debt which makes up the majority of their liability. Do they have a lot of long term debt? Only in year 3 where it jumps up to \$300. Current liabilities are also steadily raising. Deferred Income Tax is large but pretty steady, also consider that you do not pay interest on deferred income tax. It's a bookkeeping entry.

Most of their debt is good debt except for the last year where they borrow some money. Still, 35% is not over-leveraged. Even 50% could be OK if they are not paying interest on most of it. (At greater than 50% get very concerned.)

If a company is over-leveraged the risk of bankruptcy is high. The accounts payable people are down to 39 days of payables outstanding, that wouldn't put anyone out of business. And that is not really any other debt.

Call this one a strength.

3-B, Long-Term Debt to LTD + SE

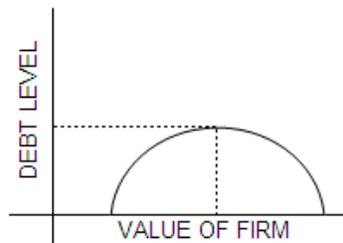
Now we will look only at long term debt. None, in 2001 and 2002 but jumps up to \$300 in 2003. The equity in this case is stockholders equity.

$$\text{Year 3: } \frac{\text{Long Term Debt (LTD)}}{\text{LTD} + \text{Equity}} = \frac{300}{300 + 3674} = 7.5\%$$

This says there is a 7.5% debt to equity ratio. Not bad. In finance they will tell you that the value of the firm actually increases with amounts of debt. But only to a point.

EXAM

If you go out to finance a corporation you can float debt or equity. If you float equity you pay dividends. If you float debt you pay interest. Now which of these expenses is deductible? INTEREST IS DEDUCTIBLE. Dividends have no such advantage. However, the risk of bankruptcy is greater with debt than with equity. The theory is that as you increase the debt there is a value to the tax shield that the interest provides. That value increases to a certain level but as you pass that level the risk of bankruptcy becomes larger and larger and the value of the firm begins to decline. Want to find the optimal point where value is at its peak and only take on that amount of debt. Also, leverage increases the return on equity. With fewer dollars invested in equity the percent return on equity is higher. The way we do this, increase the return on equity, is by increasing the amount of debt you have.



3-C, Current Liabilities to Total Liabilities

This is a measure of the amount of current liabilities relative to total liabilities. What this is saying is that current liabilities has maintained itself as the predominant source of borrowed funds for this company. Not a bad thing as long as their creditors are happy with them. This is good credit. They are barrowing and paying back (short term). As long as their creditors are happy. For example, if their accounts payable outstanding were at 150 days this would be a completely different situation. They would not have the revenue stream to make these short term debt repayments. But it's only 39 days which is pretty good.

$$\text{Year 1: } \frac{\text{Current Liabilities}}{\text{Total Liabilities}} = 84.5\%$$

$$\text{Year 2: } \frac{\text{Current Liabilities}}{\text{Total Liabilities}} = 87.0\%$$

$$\text{Year 3: } \frac{\text{Current Liabilities}}{\text{Total Liabilities}} = 80.8\%$$

Call this a strength.

NOTE: In doing this we have to really have an understanding of the numbers, whats going on. No single ratio is going to tell you the ultimate answer. Do not take any single data point out of contents. Look at it revative to the rest of the contents.

3-D, Times Interest Earned

Says how many times in my earnings before interest and taxes am I covering the interest responsibility that I have. In our example we have Interest Expense in years where there is no debt, but could be included in the “other current liabilities”. Could be short term notes, working capital lines, etc.

Take Net Income, add back Interest, add back Taxes. This gives us our Earnings Available. Then divide this by our Interest, the result tells us how many times we’ve earned our Interest, how many times our Earning cover our Interest.

$$\text{Year 1: } \frac{\text{Net Income} + \text{Interest} + \text{Taxes}}{\text{Interest Expense}} = \frac{213 + 25 + 97}{25} = 13.4$$

$$\text{Year 2: } \frac{\text{Net Income} + \text{Interest} + \text{Taxes}}{\text{Interest Expense}} = \frac{462 + 35 + 154}{35} = 18.6$$

$$\text{Year 3: } \frac{\text{Net Income} + \text{Interest} + \text{Taxes}}{\text{Interest Expense}} = \frac{867 + 94 + 305}{94} = 13.5$$

Here they have plenty of earnings to cover their interest. This is a strength.

In 4, 5, and 6 we get into things which are less tangible.

Forth, **Propensity for Reinvestment**.

4-A, R&D as % of Sales

A companies reinvestment in itself is a critical thing. Consider companies that do not invest in their equipment, just let it grow old. May be making profit and declaring it to themselves in the way of dividends whicl minimizing their investments in R&D. Basically milking the company. That is what this statistic says. Are you increasing or decreasing your R&D investment?

$$\text{Year 1: } \frac{\text{R\&D Expenditure}}{\text{Sales}} = 3.6\%$$

$$\text{Year 2: } \frac{\text{R\&D Expenditure}}{\text{Sales}} = 1.9\%$$

$$\text{Year 3: } \frac{\text{R\&D Expenditure}}{\text{Sales}} = 2.1\%$$

These results show a weakness. The company is not investing in itself. They are actually declining in their R&D investment. Although sales are increasing. Maybe there is a strategy of reasoning behind this but not apparent. May depend on what the rest of the industry is doing.

4-B, Investment in Fixed Assets Depreciation

Where do we find in the number how much they are spending on fixed assets? This information would come off the Cash Flow Statement in the Investing section.

(Here we are using Purchases of PP&E divided by Depreciation Expense).

Year 2001: None

$$\text{Year 2: } \frac{\text{Purchase of Fixed Assets}}{\text{Depreciation Expense}} = 92.9\%$$

$$\text{Year 3: } \frac{\text{Purchase of Fixed Assets}}{\text{Depreciation Expense}} = 211.2\%$$

This says that in 2002 they barely replaced assets which were depreciated but in 2003 they replaced double the assets depreciated.

Call this a strength.

4-C, Asset Turnover Ratio (Sales/Gross Fixed Assets)

This is how many dollars of sales are being generated per dollar of invested asset. More machines should be generating more productivity. Therefore there is a relationship between Gross Fixed Assets invested in the company and the Sales being generated.

$$\begin{array}{l} \text{Year 1:} \\ \text{Year 2:} \\ \text{Year 3:} \end{array} \quad \begin{array}{l} \frac{\text{Sales}}{\text{Gross Fixed Assets}} \\ \frac{\text{Sales}}{\text{Gross Fixed Assets}} \\ \frac{\text{Sales}}{\text{Gross Fixed Assets}} \end{array} = \begin{array}{l} 491.0\% \\ 733.8\% \\ 812.7\% \end{array}$$

Looks like they are generating sales per dollar of asset. Means they are investing in assets and those assets are generating sales.

If they were not investing in assets and at the same time this ratio was going up we would have to see it as a negative. If there sales are going up and they are not investing in assets then their machines are not being maintained. If this equipment is not being replaced they will become technology obsolete.

The fifth category is **Cash Management Practices.**

5-A, Dividend Policy - Payout Ratio

Take a look at the dividend payout ratio. First of all they are not paying out much in dividends. Only year 3 has a relatively small payout.

$$\text{Year 3:} \quad \frac{\text{Dividends Declared}}{\text{Net Income}} = 5.8\%$$

Can look at this in two ways. We know they have not paid out a lot of money. Their stockholders might not be happy with them. But some stockholders don't want dividends. They want capital appreciation because it is taxed at lower levels (they also avoid paying more income tax on their earnings this way). So we really don't know that this is good or bad.

Also consider if they were paying out massive dividends (like 100%) we would have to be concerned about what they have left over to reinvest.

Rate this a question mark.

5-B, Cash Flow Observations

No info for 2001, work with 2002 and 2003. What do we notice, bottom line, net change in cash, was a negative number in 2003. That's very bad, especially since it had been much higher (positive) that last year. Also, very heavy spending on investing. Where did they get the money to do this? Barrowed money to purchase capital assets. And consider cash flow from operations. This is the only real money you ever get to fund your investing and finance activities. Operations are not generating cash flow, why? Because of profitability? No, they are very profitable. The reason is because of their working capital mismanagement. The data shows that they are extremely inefficient with regard to the management of their working capital.

And the sixth, **Return to Stockholders.**

6-A, Return on Assets

Year 1:	$\frac{\text{Net Income}}{\text{Assets}} = 6.8\%$
Year 2:	$\frac{\text{Net Income}}{\text{Assets}} = 11.3\%$
Year 3:	$\frac{\text{Net Income}}{\text{Assets}} = 14.1\%$

Strength.

6-B, Return on Equity

Year 1:	$\frac{\text{Net Income}}{\text{Equity}} = 10.6\%$
Year 2:	$\frac{\text{Net Income}}{\text{Equity}} = 17.4\%$
Year 3:	$\frac{\text{Net Income}}{\text{Equity}} = 23.6\%$

Strength.

We see from all this that we can formulate the fact that Profitability is a strength, Liquidity is a weakness, etc. Can talk about each individual line item as well. Can speak of trends. What's a weakness, what's a strength?

Acct 321 - Analysis Sheet

Numbers & Letters to Describe Financial Analysis Item for a
typical Hardware Manufacturing Company

Number	Letter	Description	Industry Standard	Trend Analysis			Strength (+) or Weakness (-)
				2001	2002 (vs 2001)	2003 (vs 2002)	
1		Operational & Net Profitability					
1	A	Sales Trend		N/A	75.4%	51.1%	+ / -
1	B	Cost of Goods Sold as % of Sales (COGS/Sales)		70.9%	76.4%	74.9%	-
1	C	Operating Expense as % of Sales (SG&A / Sales)		17.0%	11.6%	11.4%	+
1	D	Operating Profit as % of Sales (Sales - COGS-SG&A)/Sales		12.1%	12.0%	13.7%	+
1	E	Net Income as % of Sales		5.2%	6.4%	8.0%	+
1	F	Quality of earnings issues (describe)	2001; sale of assets is 50% of net income. 2002; R&D cut despite strong sales increase.				

2		Working Capital and Liquidity Management					
2	A	Accounts Receivable - Days Sales O/S		87.9	69.9	76.8	-
2	B	Inventory - Days Sales in Inventory		104.8	74.6	89.9	-
2	C	Accounts Payable / Accrued Liab - Days Payable O/S		64.8	42.3	39.8	+ / -
2	D	Current Ratio		2.4	2.6	2.6	+
2	E	Quick Ratio		1.4	1.6	1.4	+
2	F	Level of Working Capital		1358	2047	3145	+
2	G	Cash to Cash / Wkg Cap Cycle		127.9	102.5	126.9	-
							Generally a weakness

3		Long Term Capital Structure					
3	A	Total Liabilities to Total Assets		36.2%	35.0%	40.4%	+
3	B	Long-Term Debt to LTD + SE		-	-	7.5%	+
3	C	Current Liabilities to Total Liabilities		84.5%	87.0%	80.8%	+
3	D	Times Interest Earned		13.4	18.6	13.5	+
							Overall this category is a strength.

4		Propensity for Reinvestment					
4	A	R&D as % of Sales		3.6%	1.9%	2.1%	-
4	B	Investment in Fixed Assets vs Depreciation		-	92.9%	211.2%	+
4	C	Asset Turnover Ratio (Sales/Gross Fixed Assets)		491.0%	733.8%	812.7%	+
							Overall this category is a strength.

5		Cash Management Practices					
5	A	Dividend Policy - Payout Ratio		N/A	N/A	5.8%	?
5	B	Cash Flow Observations					
							a questionable one.

6		Return to Stockholders					
6	A	Return on Assets		6.8	11.3	14.1	+
6	B	Return on Equity		10.6	17.4	23.6	+
							Strength

Financial Statements - Typical Computer Mfr

CLASS EXAMPLE-FOR STUDY PURPOSES - TYPICAL HARDWARE MFR				2001	2002	2003
BALANCE SHEET:						
Cash			357	627	471	
Accounts receivable			987	1,377	2,287	
Inventory			834	1,123	2,005	
Other current assets			140	164	395	
Current Assets			2,318	3,291	5,158	
Property, Plant & Equip-Gross			835	980	1,337	
Accumulated Depreciation			(11)	(187)	(329)	
P.P. & E.- Net (& other assets)			824	793	1,008	
Total Assets			3,142	4,084	6,166	
Accounts Payable			516	637	888	
All other current liabilities			444	607	1,125	
Total current liabilities			960	1,244	2,013	
Long-Term Debt			-	-	300	
Deferred income taxes			176	186	179	
Total liabilities			1,136	1,430	2,492	
Stockholder's Equity (S.E.)			2,006	2,654	3,674	
Total liabilities and S.E.			3,142	4,084	6,166	
INCOME STATEMENT:						
Sales		IA	4,100	7,191	10,866	
Gain on sale of assets			(101)			
Total Revenues			4,201	7,191	10,866	
Expenses:						
Cost of Sales			2,905	5,493	8,139	
Selling, G&A			699	837	1,235	
Research & Development			148	134	226	
Interest expense			25	35	94	
Restructuring & other costs			114	76	-	
Income taxes			97	154	305	
Total Expenses			3,988	6,729	9,999	
Net Income			213	462	867	
CASH FLOW STATEMENT:						
Cash Flow from Operations:						
Net income				462	867	
Add/(subtract)	Depreciation			156	169	
	Change in other current assets			(24)	(231)	
	Change in Current Liab.			284	769	
	Change in Accts. Rec.			(390)	(910)	
	Change in Inventory			(289)	(882)	
All other changes due to operations				41	117	
Cash Flow from Operations				240	(101)	
Cash Flow from Investing Activities:						
Purchases of P.P. & E.				(145)	(357)	
Proceeds from Sales of P.P.&E. & other-net				-	(51)	
Cash Flow from Investing Activities				(145)	(408)	
Cash Flow from Financing Activities:						
Issuance of new Long-Term Debt				-	350	
Dividends paid				-	(50)	
Issuance of Common Stock				142	100	
Cash Flow from Financing Activities				142	400	
Effect of exchange rate changes on Cash				33	(47)	
NET CHANGE IN CASH				270	(156)	