

All right, class, we're going to do another tutorial. And this is going to be on the income statement financial analysis. And we have a problem here that we took from the book. So this is Sunnyvale Clinic statement of operations or income statement, years ended December 31, 2011 and 2010. This is on page 85 in your textbook.

So we moved this over to an Excel format, and I think you're going to see this problem really comes alive when we put it in Excel, and we're able to do some really good financial analysis and to make some predictions and projections based upon the information we have here. Now typically, this is a good way to analyze an income statement when we were looking at it side by side here.

So we've got 2010 data and we've got 2011. And revenues, expenses, operating income, this is our core business. And we're going to focus a lot on this line right here, this operating income. It's basically-- it's the revenues less the total expenses.

This is going to be variable expenses as well as the fixed expenses to give us our operating line. This measures our core business. The next line down is non-operating income, and these are items that are not typical income lines for our business.

And you'll see this is contributions and investment. It's not what this hospital normally does. They receive contributions, they make investments in other businesses and have mutual funds and different investment tools, but it's not part of their core. And so we call that total non-operating income.

But when outside investors come in, when creditors look and evaluate our books, they're looking at this operating income line. The two together, the operating income plus the non-operating income, give us our total net income for our business. So a good place to start with this is to just kind of work our way through here.

And let's take a look and see what the differences are here. There are some kind of startling things here that we find as we work through this. And I guess on the surface, when we look at the revenues and we compare 2010 to 2011, there is some substantial gains here and progress from 2010 to 2011.

These numbers here are in thousands, as your book mentions as well. So this is not-- it's not \$142,000, but it's \$142 million. So in 2010 they had total revenues of \$142 million and in 2011 that revenue jumped up to \$171 million. So pretty substantial increase in business from 2010 to 2011.

But as we come down, and we work our way through here and we look at our operating income, we say, one, it's a pretty small margin to start with in 2010. So in that amount of business that they did, their operating income's only \$4 million. But the real kind of eye-catching thing is even with all of that additional revenue that they

produced, operating income actually went down in 2011.

And so there has to be an explanation as to why that would happen. Revenue increased pretty substantially. Operating income is actually going down. So we have to ask ourselves, well, why is that? And we don't have to go any further, really, than the expenses to find that out.

So what we find here is that expenses also went up, and we don't know-- well, we do know how much they went up, but we don't know at what percentage they went up yet. But we can tell by looking at this, though, that most likely expenses outpaced revenues, because there's no way for us to go from a non-operating income of \$4,330,000 million to something less than that with the bump in total revenues that we got.

So kind of on the surface, what we're going to say for right now is that we believe that the expenses are most likely outpacing-- are outpacing those revenues. Our non-operating income did better in 2011 than 2010. That's good. These are actual dollars, but again, the folks that are going to be evaluating our business are going to be happy to see that. But they're really going to want to know explanations on why operating income is going down.

Even with the additional non-operating income, though, our net income went down from 2010 to 2011. So something's happening here that we need to explain and kind of get to the bottom of. Because our financial folks, the folks at the highest level within our business of Sunnyvale, are going to want some answers as to how we did all of this additional revenue and we didn't see anything to show for it in our bottom line.

So let's kind of expand on this, and we're going to do a couple of things. One, we want to determine what are these increases and what's happening here between revenue and expenses. And then the second thing is, another way to look at this is, if this trend was to continue, at some point we're most likely going to go underwater here.

We're still showing a positive bottom line, but at some year out here, whether it's the next year or the following year or at some point, if this trend does not-- if it doesn't change, then our operating income is going to be-- we're going to be showing a deficit here. And we want to know when that is. That's valuable information to our financial management group to have some idea when that's going to take place if nothing changes.

So to start with, let's take a look here and see what we're up against as far as these percentage changes here. And I'm going to expand on our cells here. So I have a couple columns that are hidden, and let's un-hide those. And what we find is that a pretty good increase in revenue, 20% from 2010 to 2011, is pretty substantial.

From 2010 to 2011 in total expenses, though, the expenses outpaced revenue, which is what we thought was happening. And so this additional revenue that we saw here which is in the neighborhood of, it looks like about

\$29 million, was outpaced by the additional expenses, which looks like it's closer to maybe \$30 million in expenses. So all of that additional business was more than eaten up by these expenses that we took on to generate those.

Because we do only have limited information on Sunnyvale, but we can make some assumptions as to what's happening here. And we're going to do that in just a second here when we try to answer some of these questions as to why exactly this is happening the way that it is. Now the next thing we want to do, though, is we want to, like we mentioned before, we want to expand on these years.

And these are actual-- this is actual data here between 2011 and 2010. But if we were to project and say, if revenues continue to move the way they are at this 20% increase, and expenses continued and non-operating income increased by 6%, if that trend was to continue, then what would our income statement look like, say, a couple of years from now? And we can do that. And there are some columns that are hidden here, and we're going to expand on those.

And when we do that, we find that in 2012, our bottom line would be, if nothing changes in our revenue or expenses and we stay on that same trend, our operating income would go to \$1,132,000. . Pretty significant drop from 2011. And if we were to continue on that path for another year-- so this is 2013 projected-- we would end up out here underwater and be losing \$2,747,000.

Now we put together-- like we mentioned in our input table tutorial, we're using an input here today as well for this. So we can easily make some projections. If we were able to change some of these percentages, we were able to either get leaner on the expense side, or if we thought that we could generate additional revenue without changes in our expenses, then we can easily see how it's going to roll through and affect our pro forma income statements here. So it's a pretty powerful tool to be able to do this at this point.

Again, right now the assumptions we're making are that this 22% is going to continue on the expenses to increase. And revenues are going to increase at 20%. But let's say we were able to identify exactly what's causing this and we're able to reverse that. We're able to determine what is it that's-- why is it that our revenues are lagging behind what our expenses are. We were able to make that change.

And say we were able to bump that revenue up to 22% to match the change in our expenses. And if we were able to do that, just that one move-- that 2% change in revenue, either through what we charge our customers or through the volume of business that we're doing, or a combination of those two which would change our revenue-- would set us on course for a much better bottom line than what we were showing if we continued this trend.

As another way to look at this, if we dropped that back, and we said, OK, we really don't think that we're going to

be able to increase our revenue that additional 2% that we were projecting there, but maybe we could attack this problem on the expense side. And if we were able to keep revenue at the same pace or that same trend, but we were able to decrease our expenses by that 2% to match that change in revenue, if we were able to do that, then what would our bottom line look like out here in these out years in 2013? And if we were able to do that then similarly we would have a positive bottom line in our 2013. We would be able to move that needle out to \$5,396,000 which is pretty positive there.

By setting this input table up and in doing this financial analysis in this way, it really gives us a lot of opportunities to basically do a lot of what-if type of analysis. If we knew that we had a large contract coming, and we knew it was going to be favorable to the hospital, and we were able to project that it was going to be substantially better than kind of the trend that we're on right now, maybe that revenue number is going to jump to 25. You're going to see really how sensitive this model is to relatively small changes.

So that small change in revenue to go from 20% to 25% has an incredible kind of rippling effect through our worksheet, and our income statements and our projections that we have. I mean, that's an incredible jump to a small change in revenue like that produces this really large change in operating income. We're going to be able to measure this in the module that's coming up here, when we do the degree of leverage calculation that we do.

But you can see that this relatively small increase in revenue creates this huge change in our operating income here. So it's this type of what-if analysis that we're looking at when we apply it to this income statement that we're going to do a lot of this in the course, but these are the type of things that I want you to think about as you view some of this analysis and these worksheets that we're working through.

If we take this back to where we kind of began at, and we start to ask some of the questions, OK, why is this happening the way it is? And specifically, between 2010 and 2011, how is it that this happened? And at this point, because we are not insiders in the company and we don't have access to all of this information, but if we were a creditor or a potential investor in this company, we would want to know these answers. But we can make some assumptions here.

And the first thing I want to look at is we want to kind of test the efficiencies that Sunnyvale has between its revenue and in its manpower, or the folks that are generating this revenue for them, and that comes down to, are the folks that work, the salaries and the benefits, and those people that are actually working for us. And so we can test the manpower efficiency through this calculation.

And I want you to-- let's first take a look at 2010. And the way that we do this is, we simply take the total revenues that are produced, which are \$142 million, and we're going to divide those by the salaries that were used to generate that \$142 million. So we needed these people to do what they do, whatever role it is that they have with

Sunnyvale-- some of them are surgeons, some of them are nurses, many different positions that contribute to this generating of revenue-- but if we take that \$142 million and we divide it by the salaries, what we find is we get this factor which is 1.3946.

And what this says is, for every dollar spent in salaries and benefits, Sunnyvale produces \$1.39 in revenue. Now how's that compare to the next year? And when we moved into 2011, what we find is that we do the same calculation, it's \$171 million divided by this \$126 million in salaries, we find out is their efficiencies have actually gone down. And it's kind of explaining maybe what is happening here.

And so from year 2010 to 2011, they became less efficient between those two years. So what's driving this slide in efficiency? Well we don't know from the information, but we can make some assumptions here. It's possible that Sunnyvale grew maybe too quickly. They weren't able to hire on the nurses or possibly even the doctors that were required to do the procedures that they billed for.

And they ended up having to pay a premium for nurses, either through overtime and the current staffing that they have, or possibly they had to bring in travelers. Because clearly they have the business. The question is why did it cost them more than the previous year in salaries and benefits to support that additional revenue that they produced.

Another possibility is that they may have anticipated this growth, and they brought new people in. But for nurses and for doctors as well, there's an orientation process that takes place. And all of this manpower is costing them money. But because they're in this orientation phase, they're not necessarily efficient at that point, and they're basically following other nurses around and trying to get up to speed before they can actually be put in a room or in an operating room or on a floor by themselves, which would in turn increase salaries and benefits.

And it may increase it at most likely a faster rate than the revenue that they're producing. So those are two possibilities. The third one is it's possible that the staff and the nurses and the doctors all received pay increases, but they did this without increasing the fees to their customers. They may have fixed contracts, and they're not able to increase their own fees to their customers for the services provided, but all of these folks received pay increases themselves. And that would tip this and put more pressure on the expenses and create this imbalance between the 22% increase in expenses versus the 20% increase in revenues.

So we don't know for sure, but any of those three could be-- or possibly all of those three are contributing to this problem that Sunnyvale has on their income statement and the projections that we're making here. So once we were able to identify these, and if we were inside the company, we were financial managers inside Sunnyvale, these are things that we would be certainly looking at and trying to determine exactly what caused this imbalance, what caused expenses to outpace the revenues the way that it's happening here.

There's a whole other worksheet on this. There's a balance sheet. I'm going to stop this tutorial at this point, and then we're going to do another tutorial on the balance sheet. We're going to look at it in a similar way, and actually, we'll use some of this information from the income statement to support our analysis on the balance sheet as well. So this concludes our income statement tutorial, and I'll see you on the tutorial for the balance sheet.