Business Analysis for Engineers
Prof. S. Vaidhyasubramaniam
Adjunct Professor, School of Law
SASTRA University-Thanjavur

Lecture-5
Balance Sheet Fundamentals

The last class we ended the discussion with the current liabilities in a balance sheet and to be more specific it was an issue of deferred revenues that I ended the class. There was a question to further elaborate on what deferred revenue is with a good example. Let us say I am a magazine subscription company. So the entity that we are talking about is a magazine subscription company.

And that have collected cash or collected money with a promise that I am going to for the next 12 months provide you with the monthly issues of the magazine. Now from the entities perspective, from the subscription companies perspective the balance sheet would show the amount that have collected as a default revenue. On one hand on the assets you could have recorded the cash that have received for this.

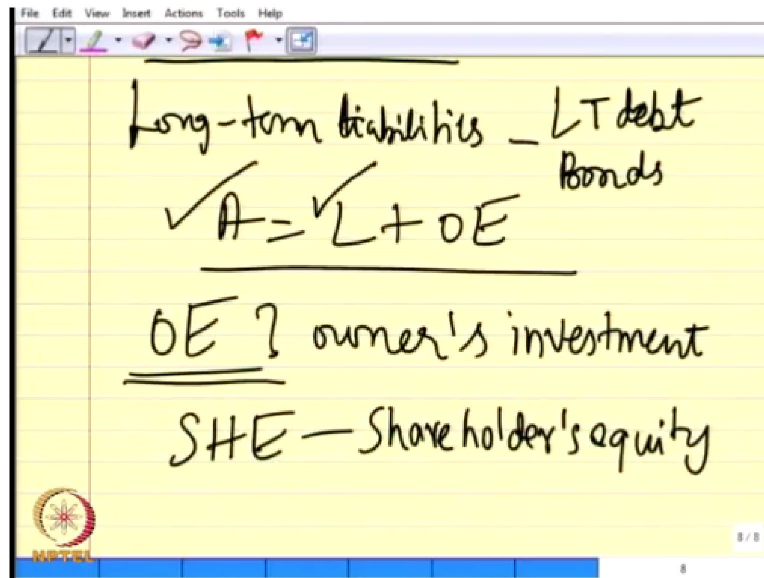
And on the other hand I would record because the principle of duality the other entry corresponding to this cash should be the default revenue and why is this a current liability because this represents the liability that arises from the fact that as an entity have received money and I am bound to provide these magazines every month for the next 1 year. Now what happens when I start doing that is a first month I delivered the first issue.

So 1 12th of the money that I received will be recognised as a same, but that point of time 1 12th of the amount would be recognised as sales and I would not add cash because I have already received this money. So that 1 12th would be reduced from the deferred revenue liability. So that would be the corresponding second entry one month later after I have supplied this magazine.

We will talk about this more when we are talking on concepts like recognising and realising revenues. But for the purpose of understanding why deferred revenue the liability, this is a very good example, so that you will appreciate that this represents the liability of an entity to

provide a service for which it is already received in advance payment. Now getting a little further just as we have current assets and fixed assets.

(Refer Slide Time: 03:06)

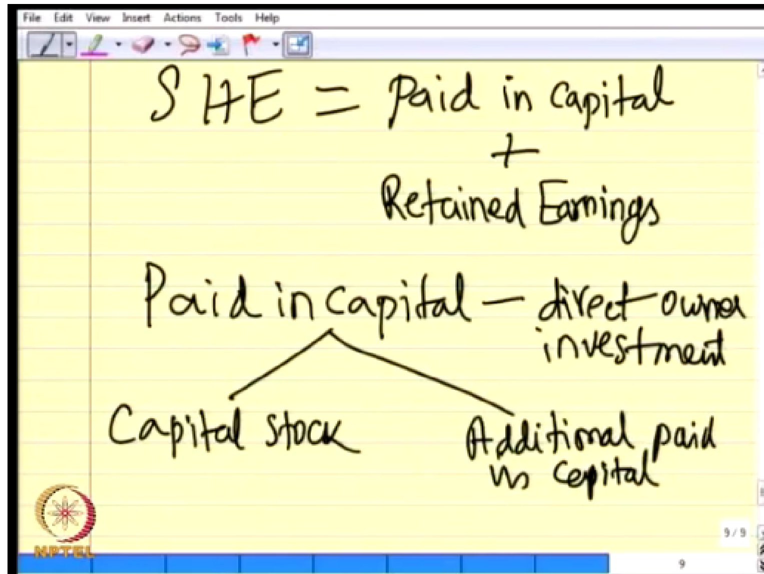


We have current liabilities and long term liabilities. Long term liabilities are predominantly long term debt are the companies on bonds that the issue. So which means I borrow money from the bank, repayment period 8 years, 10 years, since it is long term that the stands as a long term debt or raise money by selling corporate bonds, the period duration of the bonds 5 years, 10 years whatever the case may be, these are long term debts.

And I have already told you that the fundamental equation is asset=liabilities+owner's equity. We have seen what assets categories are, what liability categories are. Let us see what the owners equity categories, what is owner's equity, the owner's equity is the extent to which an owner's investment in an entity is expressed. Usually we see that this gets reflected from the fact that you know owner or a group of owners owns certain percentage of shares in the incorporated entity.

So the extent to which he wants wishes determine section to which he owns the entity. So that is why you often see that this owner's equity terminology itself is substituted with this terminology called shareholders, equity the extent to which I own the shares of the particular firm.

(Refer Slide Time: 05:06)



So the shareholders equity has 2 parts in it, the first part is the paid in capital and the second part is the retained earnings. So what is paid in capital, a paid in capital part of the shareholders equity is the amount that the owners have directly contributed to creating this entity. So this is the amount that they have directly invested in the business, the extent to which their contribution is represented in the direct investment that is been made is the extent to which they own this entity.

(Refer Slide Time: 07:02)

Paid in capital

Common stock at par	1,000,000
Additional paid in capital	4,000,000
Paid in capital	5,000,000

Now again this paid in capital which is the direct investment, direct owner investment has two parts, capital stock and additional paid in capital. What is the difference I told you before that you know shares are issued by companies and the extent to which somebody owns the share, that I meant section to which he/she owns the entity. Let us say that an entity has 1 million shares outstanding.

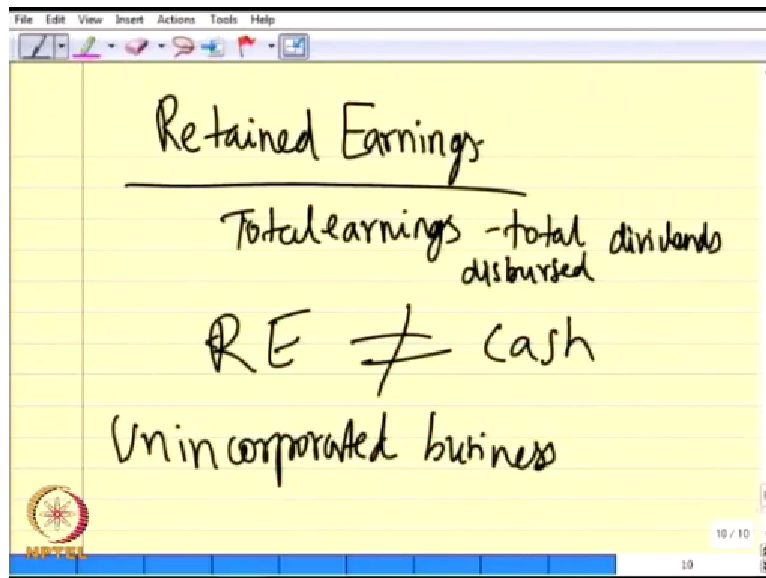
And when we talk about share every share has a par value, the value that appears on the share certificate. Let us say this 1 million share that is outstanding has a par value of rupee 1 and as investors, investors paid rupees 5 to own 1 share, does it make sense can you appreciate difference between capital stock and additional paid in capital. The share that is sold to an investor for rupees 5 has a capital stock component which is represented by 8 or value of rupees 1.

And an additional paid in component which is the differential of rupees 4 and since we have 1 million shares outstanding how was this expressed. So your paid in capital gets modified, paid in capital is now represented this is for the entire 1 million shares. So it is usually represented in your balance sheet if you look it was a common stock at par that is your 1 million and additional paid in capital you are additional paid in capital is your 4 million. So your total paid in capital is 5 million.

So the excess over bar is your additional paid in capital. Now we are shareholders equity as I told you before has two components your hair in capital and your retained earnings and we just saw what is paid in capital is then what is retained earnings. Now retained earnings is the second category of shareholders equity, see the owner's equity in a business increase if the earnings of the business increases what do I mean by earnings of business.

I make a sale that is income, there is lot of expenses associated with the say that I made after meeting all those expenses, taxes, I have some net income that is available to the owner, which means after meeting all the expense related items there is a free income that is available to the owner and let us say this is the earning that is available to the owner. So the owners equity gets increased because of this increased in earnings.

(Refer Slide Time: 10:06)



So suppose from the earnings the board decides to disburse the dividends which means it goes to the shareholders also. The principle owner's equity gets reduced because of this disbursal of dividends, otherwise they earnings rudimentary come to me or to the firm, now it is disburse as evidence and after dividends whatever is remaining part of the earnings that is available gets into the firm has retained earnings.

So retained earnings can be expressed as the total earnings-the total dividends disbursed. When because in your balance sheet that retained earnings will be one number, it is the difference between a total earnings of the entity from the time of conception to the balance sheet date and the total amount paid as dividends out of the earnings, right from the time of his inception up to the balance sheet date.

That is the retained earnings component or to put in a better perspective for you to understand it is that that gets reinvested into the business, the money after even the dividends are distributed that gets retained by the business for his own internal investments is your retained earnings. But here is that you should not confuse retained earnings with cash, retained earnings is not equal to cash.

You look at the sample balance sheet, you find that retained earnings is an amount by cash is different about the what is retained earnings, so what is the retain earnings it is the aggregate of all the earnings from the time of inception up to the balance sheet date-all the dividend disburse during this period and what is cash, cash is the ending cash as on that particular date, both will not be equal, very often people misunderstand cash with retained earnings.

Just as they also misunderstand income with cash, I will explain that there is also a difference between income and cash when we actually talked about income statement, but retained earnings is not cash. So why is this part of shareholders equity retain is the part of shareholders equity because the earnings that the entity earns after it has made all the liabilities whose the principal beneficiary of earning, it is a shareholder.

But I the shareholder decided that I am not going to take the money for macro environment, but I am going to reinvest into the business, retail it for the purpose of business investment I call it has retained earnings and is the money that a shareholder decided that I do not need it now, but rather invest in business and hence it is a shareholders money that just got into the business has retained earnings, it is part of shareholder equity.

So it is not just be paid in capital of the direct investment in capital that alone preference shareholders equity, it is also the extent to which is shareholder has continuously contributed by way of retain earning for a period of time, that also represents the shareholders equity. Now I can understand this is my business is incorporated because I have shared have stock to the extent to which I own the share, it can excess which I own in the business.

But it does not mean for an incorporated business there is no shareholder equity or I am not able to express shareholders equity, for unincorporated business namely a proprietorship or a partnership firm, still you can express the capital portion. Let us say in a partnership apartment and incorporated business jointly by several persons, so let us say people who own this business and the total capital the business is 30,000.

(Refer Slide Time: 16:26)

So X X's capital let us that equal part is 15,000, Y is capital 15, 000, total partners equity 30,000, partners equity will also increase or decrease based on his/her share of the entities earnings during the period. Let us say X's capital was the beginning was 80,000 and the entity's earning from the entity's earnings the portion that X should get is 35000 and add X's earning and the partner also had some drawing during this period.

(Refer Slide Time: 17:26)

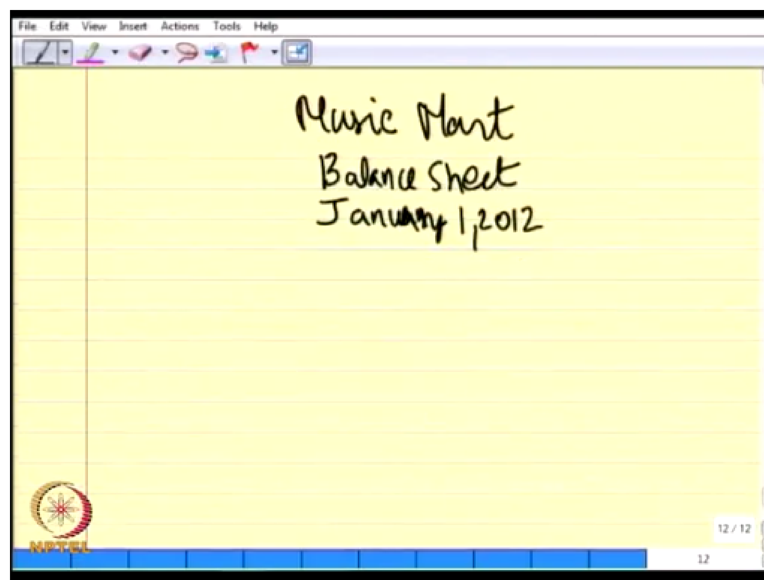
So partners or X's drawing everything within parenthesis means it is minus, so what is this 91000, it is excess capital as on a particular date, that we are studying. So the capitol part, equity part can also be expressed even for an incorporated entities. Now let us see whether with this input we can still expand our fundamental equation which is assets=liabilities+now your owner's equity get split into two parts, paid in capital+retained earnings.

Now with this definition and concepts episode earlier you can begin to appreciate changes that can happen in balance sheet based on events that occur, the numbers keep changing in the balance sheet that we start creating and as when an account and records these events it gets particularly the recorded and then the changes get reflected in the balance sheet and at each state since balance sheet is a status report.

Each stage of the balance sheet report the financial condition of the entity on that particular date it was required, It is the practice that the balance sheet is prepared that specific intervals, but for the propose of appreciating these accounting concepts I would just try to record some entry and create mini balance sheet. So that you will appreciate how these entries are been recorded at a balance sheet level.

And how a balance sheet at the end of the day balances, just for the sake of appreciation let us just quickly work some examples quick examples of the effect of a few transactions on the balance sheet of an entity form, I will give you a few examples. Now let us say a person is going to start a music store, so entity is a music store. Now he starts this business by depositing 25000 rupees of his own money and he puts this money into the business.

(Refer Slide Time: 21:33)



And in return he just get some stock certificates worth 25000 that says that this person is the owner of the business. So let us say I **I** name this music store as let say music mark, that is the name of the entity, this is our balance sheet is prepared, then what type of financial statement that we discussing we are talking about a balance sheet and let us say it is on January 1st then I put 25000 of my money to start the business.

(Refer Slide Time: 22:06)

So January 1, 2012 I started this business. So this is a balance. So this is only entry can I have balance sheet, yes I can have, the balance sheet will .look simple, that is all, but still it is a balance sheet, how simple the balance sheet look, it will be as simple as this. Assets the firm got cash how much 25000 why did I say assets cash 25000 because the firm receive 25000 from the owner, so cash 25000.

What is resource and claim view of a balance sheet, if you have a asset of 25000 and there must be a corresponding liability item, which has a claim against this asset. So in this case who has a claim against this asset of 25000, it is the owner. So where I will record this, under the liability, the owners equity section, paid in capital 25000. This is a balance sheet, yes it is a balance sheet.

Why it is a balance sheet, is it represents assets and liabilities of the entity and 25000 is the asset and 25000 is the liability, it is a balance is the most simplest form of a balance sheet. Now suppose after sometime that the firm decides to borrow some money from a bank and let us say the amount that I borrow surround 12500, now what happens when I borrow money from the bank.

What is the effect on the balance sheet, now the first entity, the first balance sheet that we created was during the creation of the firm, the second one is the bank loan, the music mart, balance sheet in same except that the date changes, so assume that before January that is why

did this on January 10th. So we will have balance sheet, we will have music mart here assets cash.

(Refer Slide Time: 25:46)

Now I borrow 12500 which means the cash that I have now will be 37500. Now in this site liabilities+owners equity. What will be the corresponding entry, one thing that does not change is one paid in capital right 25,000, but the fact that owe the bank 12500 as to be recorded as liability. So I say loans payable 12500. So total 37500 equal. So what is the balance sheet of this form as on January 10 2012, this is the balance sheet of the firm.

This is simple balance sheet except because 10 days we had only 2 transactions, but still qualifies to be a balance sheet. Now suppose I started business I purchase some inventory worth rupees 5000 and how would I purchase the inventory there are two ways I purchase inventory worth 5000 and say that I am going to pay this 5000 later or I purchase inventory 5000 is it okay I pay 5000 right away, that assume that this is the second option.

So I purchase inventory and paid 5000 rupees and when did I do this lets had it is on January 15, so balance sheet 15/01/2012. So what happened to my assets, there will be two entries now, what will be the 2 entries one is that I have paid 5000 rupees, so where did a paid from cash of 5000. So my cash gets reduced by 5000, so what is the principle of duality there should be a dual impact.

There is a second impact because I paid this cash I got inventory worth 5000, that has this transaction altered my liabilities+owners equity, no, my loan payable paid in capital remains

unfolded, as a result of which total is 37500, here also 37500. I say I can do this transaction in two ways except I chose to pay now had I chosen to pay this a little later, the balance sheets are being assets 37500.

My liability that was also increase because I have not paid this inventory. So what happened to the balance sheet, balance sheet amount would have been just I want to spent a little time here, somehow at this stage this is where I am purchasing inventory. I said I purchase inventory because I paid removed 5000 from cashier, but if I have not done that, and I said I could pay later this 37500 made that I would have added inventory, so 37500+5000 that is 42500.

The dual impact the second impact would have been on the liabilities side where had added one more entry called house payable 5000 as a result of it this total balance would have changed to 42500. So that also is a balance sheet, that also a correct balance sheet for the same pub except that the way in which I transacted before. Now let us say for I begin selling, so I sold something.

(Refer Slide Time: 30:28)

Let us say for 750 rupees, I sold some Merchandise that was costing only 500 rupees, now what will happen, some interesting I sold Merchandise costing 500 for 750 rupees, this is the transaction, how do I record this, cash increases because I sold something and in return I got cash, how much did I sell it for, sold it for 750 rupees. So what would be the total cash 33,250, what would be the value of the inventory now. I did not sell an item from pea nut, I consumed some inventory.

What is the value of the inventory that I consumed, it is 500, so from that 5000 that was existing before I sold 500 worth merchandise, so what will the total here, so this is on the asset side. Now how do we record this in liabilities owner's equity. As the fact I have sold inventory worth 500 for 750 rupees changed by equation with the bank no, so I still owe the bank. So my loans payable does not change.

My paid in capital also does not change, what is the paid in capital remains 25000, so where do we accommodate this difference here it is 37500, here this is 37750, where do I accommodate this difference of 250, it gets into the retained earnings component, why because is 250 is the profit of the sale and this entirely belongs assume that there is as on date there is no other liability it entirely belongs to the owners equity.

So the owners equity has increase by 250, in which part of the owners equity increases by 250 not the capital because it is not going to the capital, it is the retain earning spot that got increased by 250, remember I told you before the retain earning is not cash look at this balance sheet, we have a cash of 33250, you have retained earnings of 250 only means the retain earnings is not equal to cash.

So at this point if you are not able to understand some of the concept is no reason to get alarm, because in the subsequent sections we are going to considerable expand and concepts of the concepts, some categorisations that I have made and we will describe in detail how the behaviour of these account categories change under different context, but it is essential that you understand that the fundamental equation that always remains uncompromised is that assets=liabilities+your retained earnings.

And that when you record these transactions that you will be following set of concepts, the 5 concepts that we have already covered with recap of the money measurement concept that says that all accounting transactions need to be monetized, the entity concept that says that individual is different from the firm to going concern which assumes the entity of exist forever.

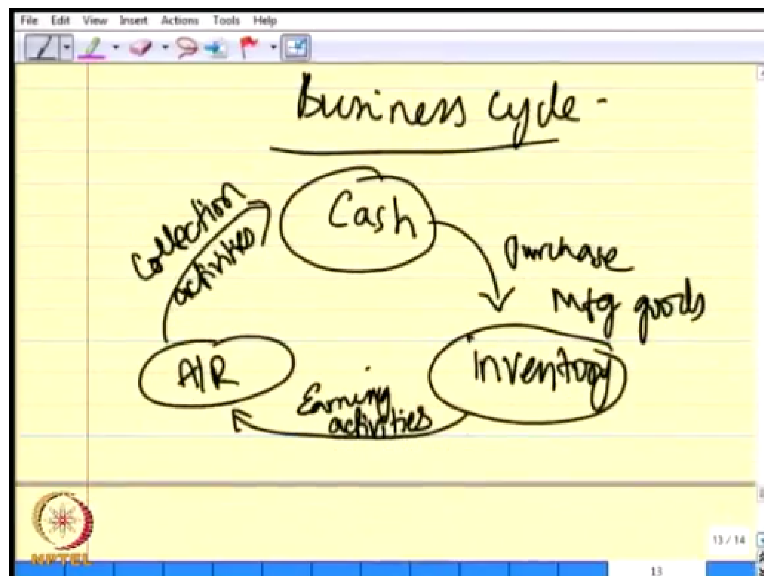
The cost concept which says that the asset is recorded at the cost of acquisition, in the dual aspect with says that every transaction effects at least 2 items and preserves the fundamental

equation liability+owners equity=asset, and that you also saw what a balance sheet is all about. So what we will be doing in the next class is to also understand what income statement is in what remaining 6 concepts based on the account principles have been framed.

Now before I go that you should understand is different from balance sheet, see the entity for which we are creating this financial statement, I say I can expressed in two ways, one is look at the balance sheet it gives you a status report. So that tells you the financial strength at a given point of time and hence it is called as status reporter or stock report. As against an income statement which I said in the previous classes is a flow reports which measures the flow over a period of time for people who understand physics or engineering.

You know it is difficult to predict the position as well as velocity at the same point of time, so either I look at the balance sheet and understand the financial position at that point of time look at the income statement to understand period of time income statement is not a snapshot, a balance sheet is not a motion picture, balance sheet is a snapshot an income statement is a motion picture.

(Refer Slide Time: 37:48)



Now what is that in an income statement that we are trying to cover, some continuous flow, what is that continuous flow in a business cycle any business cycle if you look at it, any business cycle will have cash and with cash what will you do, you purchase inventory or you manufactured goods as a result of which you have some inventory and what do you do with the inventory to engage in some earning activities, that results in sales and accounts receivables as well.

How does account receivable get converted to cash because you have some collection activities. So you get cash by sales or accounts receivable converted to cash because of collection at activities, then you use the cash to purchase inventory and the purchase inventory, you manufactured goods and then you have finished good inventory that needs to be sold.

And the time between selling inventory again connecting cash are which account receivable period your engagement in earning activities, it actually convert finished inventory into sale. Now we are interested in seeing the behaviour of this earning activities, some finished good that means sold, now price the sold, what is the charge that is a portion to the revenue that is generated, what is the expense against the revenue that is being generated is the sale been made profitable.

So between this period of inventory to cassette sale or account receivable for later being collected as cash is a running activities and an income statement focuses on earning activities and the related expenses associated with these earning activities which means for unidentified revenue you have identified set of expenses. If you are enable to record both these then you can say that this is the net income or so on.

So an income statement us based on focusing these earning activities, but the question is how do you know whether you have made a sale or not, another question is I know I made a sale, but I do not know whether I can I will collect the entire amount or I will just receive some amount. Another question is I made sales there is revenue but I do not know what portion of the expense can be a portion to this particular revenue.

So questions can be little complicated, how do I recognise save first, how do I realise sale the extent to which sale is made and how is that I am able to match corresponding expenses with corresponding revenues for that you need to understand the other 6 principles of accounting, what of it first 3 is related to what I was talking now, recognition, realisation and matching expenses to revenues.

And then other 3 standard accounting concepts which I will be explaining in next class, the remaining 6 concepts based on which the accounting principles are involved. So at the end of

this class I am sure you would have understood those 5 concepts and the balance sheet of an entity and what the balance sheet conveys, looking at the balance sheet you can see how financially well off is a particular firm.

Next class I will give you a introduction to the income statement and we will also be covering the remaining 6 accounting concepts and then when you begin to look at both the balance sheet and income statement together with these accounting concepts forming the background then you will begin to appreciate that a balance sheet and income statement so finally interwoven gives more information about the firm.

Then each of them look independently after which we actually would getting into the real double entry bookkeeping concepts, the concepts of debit, credit, how do we identify measure and communicate this transactions in the form that is university understood in the same way that you be covering in the subsequent classes. So next class be prepared to understand what an income statement is.

And what the 6 remaining principles talk about, and as I have showed you I would also bring during my next class the sample balance sheet and income statement that also I will put it as part of this lecture, so that we can revisit the sample balance sheet and income state today's lecture notes, so thank you very much I will see you next time.