

**Financial Management for Manager**  
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**Lecture 09**

**Financial Planning and Forecasting Part IV**

Welcome all. So, we are in the process of learning about the financial planning and I will now in this class conclude about the say entire discussion on the financial planning. So, we discussed some important concepts that what is the financial planning an what we include in it, and we discussed that with the sales forecasting and the projected financial statements and some other important say tools we can go for the financial planning.

We discussed at length the importance of the financial planning relevance of the financial planning, and how we can take the things forward and how we can means improve the things the overall things as far as the financial performance of the firm is concerned. So, now before I close a discussion on the financial planning I will also discuss one more small problem which is with regard to say estimating the or learning about estimating the external financial requirement for the given amount or the projected amount of the sales growth. Practically how we can do it.

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**GROWTH AND EXTERNAL FINANCING REQUIREMENT**

Manipulating Eq. a bit, we get

$$\frac{EFR}{\Delta S} = \frac{A}{S} - \frac{L}{S} - \frac{m(1+g)(1-d)}{g}$$

**Illustration**

$A/S = 0.90$ ,  $\Delta S = \text{Rs. } 6 \text{ million}$ ,  $L/S = 0.40$ ,  
 $M = 0.05$ ,  $S_1 = \text{Rs. } 46 \text{ million}$ , and  $d = 0.6$

$$EFR = (0.90)(6) - (0.4)(6) - (0.05)(46)(0.4)$$

**= Rs. 2.08 million**

$$\frac{EFR}{\Delta S} = \frac{0.50}{g} - \frac{0.05(1+g)(1-0.60)}{g}$$

$$= \frac{0.50}{g} - \frac{0.20(1+g)}{g}$$

$g$ (%)	5	10	15	20	25
$EFR/\Delta S$	0.08	0.28	0.35	0.38	0.42

So, we have seen it with the help of this model here that with the help of this model we can do or we have applied some values also here and we have found out that how that external financing requirement which is 2.08 million we have calculated here can be calculated. But for example if you are given some say hypothetical figures or the hypothetical balance sheet.

So, from that balance sheet how can you think about that from this given information from this say balance sheet how much is going to be our external financial requirement.

Means if we are at this level and we want to grow our sales from the current level to the next level then how to calculate that external financing requirement. One more problem I will do it here and then I will close a discussion on the financial planning. So, here I am taking the figures for example there is another company ABC limited.

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ABC Ltd		Rs	
L.T.B.	✓ Share Cap - 50	Fixed Assets	130 ✓ FA
+	✓ R.E. - 60	Int.	90 ✓ I
S.T.B.	✓ d.T.B. - 80	A/Rs	80 ✓ CA
+	✓ S.T.B. - 60	Cash	20 ✓
S.S.F.	✓ Trade Crs. - 50		
	✓ Provisions - 20		
	<u>320</u>		<u>320</u>

P. Sales = 400 (Lk.)  
 Pro. Sales = 50 (Lk.)  
 Profit = 50  
 Dividend Payment = 0.50  
 d.T.B.  
 S.T.B.  
 S.F.

This is the company called ABC limited, ABC limited and the balance sheet of this company is for example we have share capital. This is the share capital and the share capital for example is 50 lakh crore whatever you call it as this is, the figures are in rupees. So, this is all the figures we are taking here as in the rupees. So, this is the share capital 50 lakhs then we have the retained earnings.

The retained earnings are like 60 lakhs then we are given the long term borrowings we are given the long term borrowings L.T.B, Long Term Borrowings are given to us here as 80 lakhs or the 80 million then the short term borrowings, short term borrowing are already with us which are given to us as 60 million and then we are given the trade creditors or you call it as sundry creditors. You know sundry creditors when we buy the raw material on credit from the suppliers.

So, we means have some, some liabilities short term liabilities which appear in the balance sheet they are called as a trade creditors and this source of financing for example share capital is a internal source of financing retained earnings are the internal source of financing retained earning means retained earnings means the part of the profit which is reinvested back into the

business that becomes the retained earnings long term borrowings means long term borrowing mean from the financial institutions or may be from the, with the help of the bond or debentures short term borrowings this is again from the banks or the financial institutions for the working capital requirement or the short term financial requirement.

And then we have the, now the trade creditors largely they are called as spontaneous finance they are called as spontaneous source of finance and for example the trade creditors given to us here are 50 lakhs and then we have the next one is the provisions we have the provisions here and the provisions is again 20. So, this total becomes the 320 lakh rupees or 320 million the size of this balance sheet from the liability side if want to find out is 320 million.

So, this is the liability side of the balance sheet. Now, I will take it to the asset side of the balance sheet again in the rupees all figures are and here first we have the fixed assets. We have the fixed assets how much is the fixed assets 130 lakhs or we are given the second is inventory.

Inventory is how much? That amount is given to us is 90 and then we are given here is as a receivable. So, you call it as accounts receivable I am writing in the short form accounts receivable given to us are 80. And then you are given the cash, cash available with us is 20. So, if you total it up the size of this side also becomes 320 million or 320 lakhs or whatever it is.

So, now this is the balance sheet available with us and now the present level of sales is in the current period the present level present sales if you calculate the present level of sales is the 400 lakhs and rupees 400 lakhs and if you and next year if you want to take the proposed sales, proposed sales we want to make it to how much 500 lakhs rupees lakhs. We want to make it as 500, so there has to be a net increase of the 100 lakh rupees.

We want to increase it by 100 lakh rupees. So, the 100 lakh rupees means we want to grow the sales from the 400 lakhs to the 500 lakhs or 100 lakhs we want to increase the sales worth rupees 100 lakhs we want to increase the sales. So, if you want to increase the sales in the next year from the 400 to 500 and the another important information given to us is the profit.

So, here if you look at this balance sheet now we are given all this assets this liabilities and assets and now our say present sales are 400 lakh rupees and proposed sales are 500 lakh rupees. So, we want to increase the sales by 100 lakh rupees and profit margin which is say

want to take is 5 percent and dividend pay-out ratio, dividend pay-out ratio if you calculate is or which is given to us is 0.50 this is the information given to us.

So, we are given this balance sheet if this balance sheet practically because if you means tomorrow work in the organization in the department of finance you will find this kind of balance sheet than you will have on the one side of the liability on the other side you will have all the assets. So, we have the share capital explained it to you what is it retained earnings are the profits part of the profits reinvested back.

Long term borrowing is the, borrowing which is for a period of more than one year from any source financial institution and banks. Short term borrowing is a borrowing up to one years period of period of time that is called as a short term borrowings. Normally in India we borrow from the banks.

Trade creditors, so it means what happens in finance we have the three source of finance one is a long term finance then there is a short term finance and then we have the spontaneous finance or the spontaneous sources of the finance. Long term finance short term finance and the spontaneous finance long term finance if you should talk it as in this case it is the long term finance up to this it is a long term finance share capital retained earnings and long term borrowing is a long term finance.

This one thing is the short term borrowing is a short term finance and then other two sources are called as spontaneous finance. Spontaneous finance is one where you have not to say enter into a special agreement while borrowing any money or any kind of the other inputs it say continues regular arrangement.

And as an when there is a need for any particular input we place the order and the input comes to us and when the payment becomes due to be made to that source after the end of the credit period automatically the payment is send to that source and that spontaneous finance largely works in case of your say supplies or the raw materials suppliers.

Because raw material suppliers normally supply the raw material on credit and in India the standard credit period is 45 to 60 days. So, when the raw materials arrangements are done with a suppliers. So, once a long term arrangement is by the companies. So, when there is a need for the raw material order is placed with that with the supplier and then raw material comes and after that credit period which has been entered into violent, means entering into an agreement at the end of that credit period the payment is send to the supplier.

So, that source of the finance where no special arrangement have to be done. No, special arrangement has to be done, no special agreement has to be entered into is called as a spontaneous source of finance. So, these two are the spontaneous sources of the finance and when we talk about in our model A by S and L by S. So, L is particularly the spontaneous liabilities, spontaneous finance there we do not even include the short term finance.

So, this is the liabilities side of the balance sheet this is the asset side of the balance sheet in the asset these are the fixed asset or long term asset and all other assets are the current assets. So, inventory account receivable cash this all is, this all are the current assets. So, we have both fixed assets plus the current assets and we have, we have three sources that is the long term sources then we have the short term sources plus short term sources and then we have plus the spontaneous sources of the finance we have three sources.

So, finally whatever the funds we are generating we generate 320 lakh rupees of the million rupees and we have invested that in to the different type of the assets both fixed and the current assets. So, both the side are equal 320 is equal to 320. So, your balance sheet is balanced current level of the sales present level of the sales is the 400 lakhs or the 400 million and proposed for the next one year or during next one year we want to attain or take it to from the 400 to 500 million.

So, we want to increase the sales by 100 million or 100 lakh rupees and our profit percentage is 5 percent and dividend pay-out ratio is 50 percent. So, if this information is available, so to attain that growth in the sales from the 400 to 500 lakhs or million rupees, how much external financing requirement will be there?

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$$\begin{aligned}
 \underline{\text{EFR}} &= \left[ \frac{A}{S} - \frac{d}{S} \right] \Delta S - m S_1 (1-d) \\
 &= \left[ \frac{320}{400} - \frac{70}{400} \right] \times 100 - (0.05)(50)(0.5) \\
 &= \underline{\underline{\text{Rs } 50 \text{ Millions}}}
 \end{aligned}$$

		ABC Ltd				
L.T.S	✓ Share Cap.	- 50	Rs	Fixed Assets	- 130	✓ PA
+	✓ R.E.	- 60		Invnt.	- 90	+
S.T.S	✓ d.T.B.	- 80		A/Rs	- 80	CA
+	✓ S.T.B.	- 60		Cash	- 20	-
S.S.F	✓ Trade Crs.	- 50				
	✓ Provisions	- 20				
		<u>220</u>				<u>320</u>
	Div. sales = 400(k)					
	Pr. sales = 500(k)					
	100(k)					
	Profit = 50					
	Dividend Payout ratio = 0.50					
	d.T.F					
	S.T.F					
	S.F.					

So, in this case external financing requirement we all know can be EFR we have to work out here and we have already known the formula for that. So, it means the formula is we are applying the formula here again and if you know the formula. So, it means with the help of simple formula here this we can use it A by S minus L by S and the bracket is closed and then we take it here as what is the total amount is we are going to multiplied by the say delta sales that we are going to multiply by this model simple change in the model is going to be here that is the delta sales minus M and then it is multiplied by S1 and into 1 minus D.

With the help of this model we have already discuss this model means earlier. So, the previous problem which is did that was for the growth rate and this is for working out the external financing requirement. So, A by S minus L by S into delta sales means the changed

level of the sales if you talk about the change level of the sales minus  $M$  is the profit margin as compare to the sales.

That is given in the period that is the say  $S_1$  and then it is called as the dividend pay-out ratio is  $1 - D$  is the dividend pay-out ratio. So, what means when we talked about here is what is the  $A$  by  $S$  we talk about here is the that is the total assets, we have to take it  $A$  means the total assets not only the short term assets. So, total assets are how much total assets are, the total assets are going to be the balance sheet says 320 and what is the sales level, sales level currently is 400 minus what is the spontaneous finance level.

If you talk about here is the spontaneous finance level is just only 70 this and this. We have not to take even the short term finance in this. So, spontaneous finance is going to be this much. So, this is how much 70 divided by sales in the period 1 this is 400 so if you close this bracket and multiplied by the delta sales.

So, how much sales we want to increase from the 400 to 500. So, delta sales means the increased in the sales that is multiplied by 100 and minus here is the bracket that 0.05 is the profit. And what is the sales level now  $S_1$ . Sales are going to be how much 500 this is the sales level and what is the  $D$  that is 0.5 because your dividend pay-out ratio is how much 50 percent let us be more clear here.

So, dividend pay-out ratio is going to be how much 0.5 percent or 0.5 or the 50 percent. So, this finally the values we have placed in the model 320 is the total  $A$  by  $S$ .  $A$  means the total assets divided by the sales amount which is the present level sales  $L$  is the spontaneous finance only trade creditors and the provisions 70 divided by 400.

And then is the delta sales means the change in the sales which we want to increase from the present level to the in the future period on the next year and multiplied by  $M$  is the profit margin which is just 5 percent and that is the 5 percent of the increased sales and increased sales  $S_1$  means this  $S$  is 40 so  $S_1$  is 500 into 0.5.

So, it means this is going to be the final we have put the things here in and if you solve this the final result comes out as 50 rupees 50 lakh or 50 million is going to be the total requirement of the funds that is EFR is going to be.

The total EFR External Financing Requirement is going to be rupees 50 million if the balance sheet level is this much which is already prepare by us 320 million or lakhs and the present level of sales is 400 and the project level of the sales we want to take to 500 profit is 5

percent dividend pay-ratio is 50 percent. So, by applying a simple model here you can find out what is going to be my External Financial Requirement.

So, for example now you look at how easy it is we have already estimated before the beginning of that future period that means our level of sales is 400 we want to increase it by another 20 percent. Say 25 percent so we want to make it from 400 to 500 means we want to increase it by 100 million rupees.

So, if I have to increase my sales how much funds I require? Because if the funds are available from the market then only I will grow in the market or I will think of expanding my market, if the funds are not there available in the market then I should be means satisfied with or with the company should be satisfied with.

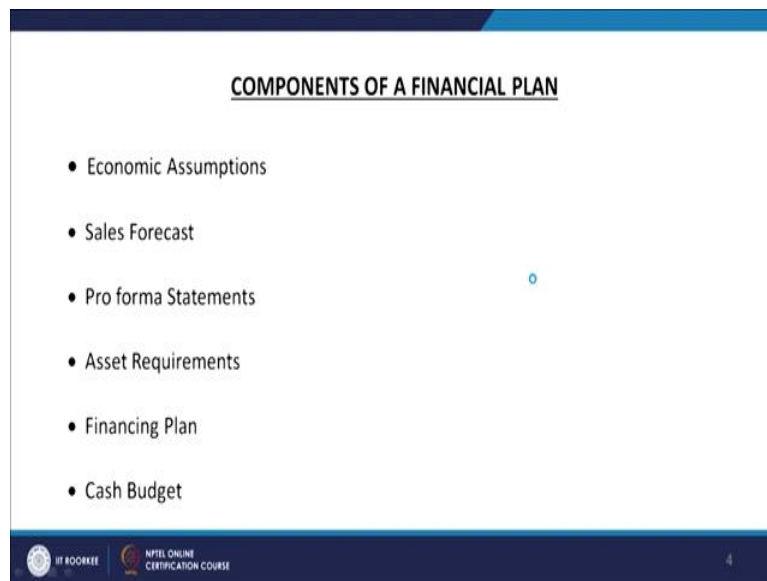
Their sales worth rupees 400 million or 400 lakhs are enough we need not to means to go beyond. Because funds are not available from the desirable sources. So, this is the beauty of the financial planning that what we are going to do in future and how much is the financial requirement for that that we have the assessed well in advance and if you have the required amount of the funds available from the different sources then you go for implementing your plans.

If the funds are not available in the market then you do not go for implementing the plan. So, it means now with these two small problems one we discuss is about that how to calculate the growth rate without resorting to any external financing. Second thing we discussed here is that if you want to grow from the present level to the next level of the sales and companies performance.

How much is going to be the external financing requirement and how to calculate it and if you know this advance then how to arrange the funds from the different external sources which are accessible to the firm. So, I think with this entire discussion of the financial planning it, if we little go back at the beginning an try to find out that where we started from and what are the different techniques of the financial planning.



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So, we started with that we have to first of all take the economic assumptions or we must be knowing that economic environment in the country. For example these days if somebody or these auto mobile companies or the electronics companies had they been knowing it in advance that there is going to be a recession in the market.

So, they must not have means planned their production capacity or their say plant capacity or their say human resources they have hired they must have been means mentally prepared that market is going to be hit by the recessionary phase. So, we have to be very careful about that we are not going to sell in the market in the time to come as we have been selling in the past.

So, either we have to reduce the production or we have to look for the markets somewhere else. If we are not able to sell in India then that leftover production which is there left with us which we are not able to sell in the present market or in this countries market we have to think of means exporting it to the other countries.

So, you have two options available at that time one is that either you minimize the, you curtail the production and then adjust according to the sales or you keep on producing whatever you are producing in the past when there is a normal economic trend in the market and then there is a surplus production left over that can be sold in the other countries market. So, economic environment, the assessment of the economic environment is very very important.

So, we have to do the EIC analysis Economy Industry and Company analysis and that is always important for the financial planning. After that then when you come to the company level you have to start with the sales forecasting if you know that in the future period of 1, 2,

3, 4 years what is going to be growth rate of the sales then you start back tracking and then you think of that for selling this much of the product how much I have to produce and what is the production cost what is the input requirements including finance and then we can arrange for the funds.

And even we are not only going for assessing the sales we are going to create the projected financial statement for the next 1, 2, 3 years. So, that we know that how your profit and loss account will look like, how our balance sheet will look like, how your cash flow statement will look like.

So, if you have already created the road map walking on that will not be a difficult thing but we have not created the road map and if you are going to move in a phase which is totally full of dark we do not know what is going to happen in the future period. Then I think the firm is going to face so many ups and downs and so many problems.

There must be requirement for external funds but we have not assess our requirement suddenly the requirement has come up. So, now we are not able to find the source from where the funds can be arranged. So, financial planning is something which is very very beautiful process and the basic tool of the financial planning we use is the budgeting the process of budgeting.


We prepare the budgets for each unit and sub units in the firm we sum it up and then we prepare the entire budget for the firm as a whole we prepare the budgeted profit and loss account budgeted balance sheet and budget cash flow statement and then from the different, with the help of different concepts we can go ahead that how we can say assess the growth rate how we can work out the growth rate of the firm.

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### GROWTH AND EXTERNAL FINANCING REQUIREMENT

$$EFR = A/S (\Delta S) - L/S (\Delta S) - m S_1 (1 - d)$$

$EFR$  = external funds requirement  
 $A/S$  = current assets and fixed assets as a proportion of sales  
 $\Delta S$  = expected increase in sales  
 $L/S$  = current liabilities and provisions (spontaneous liabilities) as a proportion of sales  
 $m$  = net profit margin  
 $S_1$  = projected sales for next year  
 $d$  = dividend payout ratio



So, if you know the growth rate in terms of the sale, you know the requirement of the funds also. So, whatever the internal funds are available with us that we know but what is external requirement if we know the growth rate we can assess our external funds requirement also.

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### GROWTH AND EXTERNAL FINANCING REQUIREMENT

Manipulating Eq. a bit, we get

$$\frac{EFR}{\Delta S} = \frac{A}{S} - \frac{L}{S} - \frac{m(1+g)(1-d)}{g}$$

*Illustration*

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$$EFR = (0.90)(6) - (0.4)(6) - (0.05)(46)(0.4)$$

*= Rs. 2.08 million*

$$\frac{EFR}{\Delta S} = 0.50 - \frac{0.05(1+g)(1-0.60)}{g}$$

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And at the same rate because you are growing so growth will depend upon the availability of the finance and the financial requirement will be possible to be worked out upon the say working out the growth rate. So, growth and external source of financing they are reciprocal to each other they are compliment to each other. So, we are able to find out therefore given rate of growth how much external financing requirement is there and if we do not want to resort to any external financing what will be our growth rate?

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**INTERNAL GROWTH RATE**

The internal growth rate is the maximum growth rate that can be achieved with no external financing whatsoever. It is the growth rate that can be sustained with retained earnings, which represents internal financing.

$$\text{Internal growth rate} = \frac{\text{Return on assets} \times \text{Ploughback ratio}}{1 - \text{Return on assets} \times \text{Ploughback ratio}}$$

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So, everything can be worked out with the help of these models and these formulas and you can be very comfortable that when we are into the real business we can find out if we have the sufficient external funds available at what rate we can grow? If there is no external funds available at rate what we can grow?

And if we do not want to have even the funds are available but we do not want to borrow any external funds may be by way of debt or equity then at what rate we want to grow or we can grow we can sustain in the market you can calculate the sustainable growth rate also. So, with this say some discussion, some important discussion, some relevant discussion I would like to stop the discussion on the financial planning.

So, financial planning is a very very important component of the overall financial management is a very very important tool of the overall financial management. So, after discussing the fundamentals of financial management at length I could discuss with you the concept of financial planning different tools and techniques of the financial planning and I think by now you must be clear about that what is the financial planning what is the relevance of the financial planning and what are the important tool and techniques of planning for the funds requirement for a future period of time.

With this I will stop the discussion on the financial planning and in the next class or in the next say, part of the discussion we will now start talking about the next and a very interesting concept a new concept which is called as time value of money. So, what is time value of money how important it is for all of us and important it is for the financial managers and the

business organisations that all and everything about the time value of money, I will discuss with you in the next class. Thank you very much.