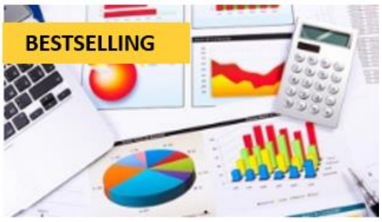
OUR BEST SELLING COURSES



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MANU	CONVERSATION BETWEEN MANU AND VINU **ABOUT** **CAPITAL BUDGETING TECHNIQUES**	VINU
		

Section 1:

Vinu requesting Manu's help for teaching basics of Capital Budgeting Process.

Manu	Hi Vinu! How are you?
Vinu	I am fine Manu! I need your Guidance.
Manu	With pleasure! But, for what?
Vinu	Our company has plans to take up an investment project. I have to advice my management, whether they should take up a new project now? For that I have to brush up my basics in Evaluating Investment Proposals. Can you help me out?
Manu	Fine! It's not an issue. So, you want to revise your knowledge in Capital Budgeting Process. I'll teach you.
Vinu	Thanks Manu! Assume, I know nothing about Financial Management and guide me.
Manu	That's the fact right?
Vinu	☹
Manu	Ok! Ok! Jokes apart! Before going technical, let us make ourselves comfortable in Fundamentals.
Vinu	Ok!

Section 2:

Manu explains why anyone would make Investment?

Manu	Why would you invest huge money in a Project?
Vinu	Obviously for getting returns! For making money out of it!
Manu	Fine! How much returns?
Vinu	Returns generally available for any business!
Manu	Please modify that Statement. Returns which you should get from Investment should not only be equal to returns available for any business, but it should also be greater than or equal to the cost of capital of business.
Vinu	Correct! When we invest in a project, it may be funded with debt & equity. Both the Funds have cost and returns should cover at least the cost!
Manu	Well said! Returns $\geq$ cost of capital. That should be the objective of any investment.

Section 3:

Vinu understands Return on Investment and Cost of Capital?

<table>
<tr><td>Manu</td><td>Now tell me, how do you measure returns?</td></tr>
<tr><td>Vinu</td><td>I am sorry Manu, I didn’t get you!</td></tr>
<tr><td>Manu</td><td>I asked ‘What is return for investing in project or what is the return for making any investment’?</td></tr>
<tr><td>Vinu</td><td>Profits!</td></tr>
<tr><td>Manu</td><td>Which profit? There are so many profits in Business. You have
a) Gross profit.
b) Operating Profit
c) Profit before Tax
d) Profit after Tax
e) Retained profit
Which profit is return for investment?</td></tr>
<tr><td>Vinu</td><td>Now, this buzzes me! Please help me out!</td></tr>
<tr><td>Manu</td><td>Ok! Let us assume you are taking up a project at a cost of Rs.100 Crs and it will be funded by debt and equity.</td></tr>
<tr><td>Vinu</td><td>Ok.</td></tr>
<tr><td>Manu</td><td>Let’s assume, Debt Equity combination as 50:50</td></tr>
<tr><td>Vinu</td><td>So funding composition should be like this?
<table>
<tr><th>Source of Fund</th><th>Proportion</th><th>Value</th></tr>
<tr><td>Equity</td><td>50%</td><td>50 Crs</td></tr>
<tr><td>Debt</td><td>50%</td><td>50 Crs</td></tr>
</table>
Is it right?</td></tr>
<tr><td>Manu</td><td>Yes! Now tell me, what is the profits / return available for owners (shareholders)?</td></tr>
<tr><td>Vinu</td><td>It is Dividend.</td></tr>
<tr><td>Manu</td><td>No! It is not mere dividend. It is entire Profit after Tax.</td></tr>
<tr><td>Vine</td><td>But only Dividend is paid to shareholders. Not the entire profits.</td></tr>
<tr><td>Manu</td><td>Yes! Only Dividend are paid or say distributed to the owners and balance is just unpaid. But still, it is payable to them. So it is also part of returns earned by the shareholders right?</td></tr>
<tr><td>Vinu</td><td>Yes! Yes!
I got it!</td></tr>
</table>

	So Profit after Tax matters!
Manu	Yes! But that is only for the shareholders. What is the returns for Bankers (Lenders)? They have also invested equally in your project (50%).
Vinu	It is Interest!
Manu	That's good. So return for Bankers are Interest and Return for Shareholders are Profit after Tax. So, if you sum up both the numbers, you would get the return expected out of the project. Is that right?
Vinu	Yes! It makes sense. Can we understand this with some numbers?
Manu	Ok! Take it now! Your 100 Crs project is funded with Debt – 50 Cr and Equity – 50 Cr.
Vinu	That's already available. What is the cost of these funds?
Manu	Say, Debt would cost 15% and Equity???? Can you assume a rate for Cost of Equity?
Vinu	Equity, Shall we assume it as 10%?
Manu	Then in that case, you should have invested your money in simple deposit with Banks / FIs which has less risk. Why anyone will invest huge money in business just to get 10% Return? Cost of equity would always be higher than cost of risk free investment and debt.
Vinu	But why's that?
Manu	Equity investors assume bigger risk! They are responsible for running the business. They take the risk of -facing losses, -fluctuating returns, -business failure, -insolvency and so many. So obviously they would expect high returns. Whereas lenders (Bankers) will get back their return whether the business makers profit or suffers loss. Since they takes less risk, their return would also be less.
Vinu	Ok! Got that! Then shall we assume cost of Equity as 25%
Manu	Fine! That's reasonable for the effect and risk to be taken! Can you calculate and tabulate the cost of funds.
Vinu	Yes!

<table>
<tr><td></td><td>(Rs. In Cr.)
<table>
<tr><th>Nature of Fund</th><th>Amt</th><th>Cost (%)</th><th>Cost (Value)</th></tr>
<tr><td>Equity</td><td>50</td><td>25%</td><td>12.50</td></tr>
<tr><td>Debt</td><td>50</td><td>15%</td><td>7.50</td></tr>
<tr><td>Total</td><td>100</td><td></td><td>20.00</td></tr>
</table></td></tr>
<tr><td>Manu</td><td>Good!
The table says, You are raising Rs.100 Crs and cost of the funds is Rs.20 Crs.</td></tr>
<tr><td>Vinu</td><td>Yes!
Rs.20 Crs is the cost for raising Rs.100 Crs.
So, the cost of capital is 20%
<table>
<tr><td>Total Cost (a)</td><td>20.00</td></tr>
<tr><td>Total Funds (b)</td><td>100.00</td></tr>
<tr><td>Cost of Funds (a)/(b) x 100</td><td>20%</td></tr>
</table></td></tr>
<tr><td>Manu</td><td>That's right!
Your cost of capital is 20%. It is also called as Weighted Average Cost of Capital (WACC). It means, if you earn 20% from this project, you will meet the expectation of Banker and Shareholders.
Both the group will be happy. What will happen if you earn 30%?</td></tr>
<tr><td>Vinu</td><td>Cost of capital is only 20%. So if I earn 30%, I will have additional earnings of 10%. It's a bonus for me!</td></tr>
<tr><td>Manu</td><td>Yes! It's for you! Meaning, it's for shareholders.
This additional Earnings is reward for the additional risk taken.
What will happen if you earn only 13%</td></tr>
<tr><td>Vinu</td><td>In that case, earnings from the project will be 100 x 13% = 13 Crs.

I should pay to two groups now.

One to lenders: They will rank first In view of agreement.

As per agreement, I have to pay Rs.7.50 Cr [50 x 15%] to them.</td></tr>
<tr><td>Manu</td><td>So after paying 7.50 Cr to the Bankers you will be left with only 6.50 Cr</td></tr>
<tr><td>Vinu</td><td>Yes!</td></tr>
<tr><td>Manu</td><td>What was the expected return of Shareholders?</td></tr>
<tr><td>Vinu</td><td>It is 25% in 50 Crs. , 12.50 Cr</td></tr>
<tr><td>Manu</td><td>So expected return was 12.50 Cr whereas actual is going to be only 6.50 Cr.</td></tr>
<tr><td>Vinu</td><td>Ya! 6.50 Cr on 50 Cr works out to 13% return against expected 25% return</td></tr>
</table>

Manu	So, this is the risk which shareholders are exposed to whereas lenders would pocket their return whether your business makes profit or suffers loss! If your business doesn't have cash generation to pay return to the lenders, they will not mind in forcing you to close the business, sell the assets and take back their money invested along with returns.
Vinu	Very True!
Manu	So the message is, before investing in any project, you have to work out the returns that can be generated which will match the expectations of both the investor groups. i.e. Both the lenders and shareholders.
Vinu	Correct! The profit that will be generated should be sufficient enough to meet the expectation of both the groups. So if we take up any Project with returns lower than Cost of capital then in those projects the losers will be shareholders.
Manu	Absolutely in those cases it would be ideal to abandon those Projects which will help to avoid opportunity losses.
Vinu	That's clear now! So we should look for appropriate profit for evaluating the investment proposals. Is that right?
Manu	A slight modification. Have your focus on cash flows than the profits.
Vinu	What that mean?

Section 4:

Manu goes deep to explain Cash inflows from operations:

<table>
<tr><td>Manu</td><td>Always remember profit can be influenced by accounting policies. What is real is cash flow.
So you should evaluate investment proposals by analysing cash flows.</td></tr>
<tr><td>Vinu</td><td>Ya! I could recollect Profit is different from Cash. So please tell me how to find out Cash generated from Operations?</td></tr>
<tr><td>Manu</td><td>It is very simple. You have to make some minor adjustments to the Profits.</td></tr>
<tr><td>Vinu</td><td>Like?</td></tr>
<tr><td>Manu</td><td>The Profit you derive would be after providing for expenses like Interest, Depreciation, Taxes and some non-cash items, right?</td></tr>
<tr><td>Vinu</td><td>Correct!</td></tr>
<tr><td>Manu</td><td>What you should do is, remove non-cash items from Profit to find out the cash profit.</td></tr>
<tr><td>Vinu</td><td>How would I do that?</td></tr>
<tr><td>Manu</td><td>Let’s take extension of our example.</td></tr>
<tr><td>Vinu</td><td>Ok!</td></tr>
<tr><td>Manu</td><td>Let’s say, if you take up this Rs.100 Cr Project, you will have Annual sales of around Rs.150 Crs.</td></tr>
<tr><td>Vinu</td><td>Ok!</td></tr>
<tr><td>Manu</td><td>You will also have expenses for Production and other operations to the tune of Rs.100 Crs.</td></tr>
<tr><td>Vinu</td><td>Fine!</td></tr>
<tr><td>Manu</td><td>You should also be paying interest on your Bank loan of Rs.50 Cr
@ 15% right?</td></tr>
<tr><td>Vinu</td><td>Yes! It would work out to Rs.7.50 Cr.</td></tr>
<tr><td>Manu</td><td>You will also depreciate your asset right?</td></tr>
<tr><td>Vinu</td><td>Yes!</td></tr>
<tr><td>Manu</td><td>Assume 8 years life for the asset and depreciate it equally using Straight Line Method.</td></tr>
<tr><td>Vinu</td><td>So my depreciation should be
<table>
<tr><td>Cost of Asset</td><td>Rs.100 Crs</td></tr>
<tr><td>Life</td><td>8 Years</td></tr>
<tr><td>Depreciation</td><td>100/8 Years = Rs.12.50 Cr</td></tr>
</table></td></tr>
<tr><td>Manu</td><td>Correct!
Can you tabulate all these and derive your profit?</td></tr>
</table>

<table>
<tr><td>Vinu</td><td>Yes!
<table>
<tr><td>Sales</td><td>150.00</td></tr>
<tr><td><u>Less:</u> Production & operating Expenses</td><td>(100.00)</td></tr>
<tr><td>Earnings before Depreciation, Interest and Tax</td><td>50.00</td></tr>
<tr><td><u>Less:</u> Depreciation</td><td>(12.50)</td></tr>
<tr><td>Earnings before Interest and Tax</td><td>37.50</td></tr>
<tr><td><u>Less:</u> Interest</td><td>(7.50)</td></tr>
<tr><td>Earnings before Tax</td><td>30.00</td></tr>
</table></td></tr>
<tr><td>Manu</td><td>Good!
You have sales of Rs.150 Crs; Expenses of Rs.120 Crs and Profit of Rs.30 Crs</td></tr>
<tr><td>Vinu</td><td>Oh! No!
I have not considered the effect of Tax pay-out. Should I?</td></tr>
<tr><td>Manu</td><td>Yes! You should!
Assume you have to pay Tax @ 30% on your profit and work out your profit after Tax.</td></tr>
<tr><td>Vinu</td><td>Ok!
Rs. In Crs
<table>
<tr><td>Sales</td><td>150.00</td></tr>
<tr><td><u>Less:</u> Production & operating Expenses</td><td>(100.00)</td></tr>
<tr><td>Earnings before Depreciation, Interest and Tax</td><td>50.00</td></tr>
<tr><td><u>Less:</u> Depreciation</td><td>(12.50)</td></tr>
<tr><td>Earnings before Interest and Tax</td><td>37.50</td></tr>
<tr><td><u>Less:</u> Interest</td><td>(7.50)</td></tr>
<tr><td>Earnings before Tax</td><td>30.00</td></tr>
<tr><td>Less: Tax @ 30%</td><td>(9.00)</td></tr>
<tr><td>Earnings after Tax</td><td>21.00</td></tr>
</table></td></tr>
<tr><td>Manu</td><td>Now your Income Statement is complete. Let us try to understand the return earned for the project.</td></tr>
<tr><td>Vinu</td><td>Ok!</td></tr>
<tr><td>Manu</td><td>Which profit reflect returns now?
Is it PAT/PBT/EBIT/EBDIT?</td></tr>
<tr><td>Vinu</td><td>PAT?</td></tr>
<tr><td>Manu</td><td>Ok! Let's analyse that!
Returns for this Project means, the profit that is available to meet the cost of both the investors (Lender & Equity) group, right?</td></tr>
<tr><td>Vinu</td><td>Yes!</td></tr>
<tr><td>Manu</td><td>From your Profit after Tax you will be able to able to pay shareholders right?</td></tr>
<tr><td>Vinu</td><td>Yes! Very much! It is from PAT, we pay dividend to the shareholders!</td></tr>
<tr><td>Manu</td><td>Ok! But, will you be able to pay your lender???</td></tr>
</table>

<table>
<tr><td>Vinu</td><td>Lender??? Oops! This Profit after Tax is after paying interest!</td></tr>
<tr><td>Manu</td><td>Yes! So understand Profit after Tax would reflect return for shareholders only but not for lenders.
Since you are interested in finding return for both the group, what you should do is???</td></tr>
<tr><td>Vinu</td><td>Add back interest with Profit after Tax???</td></tr>
<tr><td>Manu</td><td>Absolutely!
By adding back, Interest, you will now have return for both the group.</td></tr>
<tr><td>Vinu</td><td>Yes!
Shall I work out for our example?</td></tr>
<tr><td>Manu</td><td>Please!</td></tr>
<tr><td>Vinu</td><td><table>
<tr><td>Profit after Tax</td><td>21.00</td></tr>
<tr><td>Add: Interest</td><td>7.50</td></tr>
<tr><td>Profit before Int.</td><td>28.50</td></tr>
</table></td></tr>
<tr><td>Manu</td><td>Vinu! I want to take you through an important concept now.

What you have done now by adding back interest is right! But please visualise what would have been the Profit after Tax, if there is no Interest expenses.</td></tr>
<tr><td>Vinu</td><td>Let me try!
We know EBIT was Rs.37.50 Cr. If there is no Interest Expenses, then PBT and PAT would be,<table>
<tr><td>EBIT</td><td>37.50</td></tr>
<tr><td>Less: Interest</td><td>Nil</td></tr>
<tr><td>PBT</td><td>37.50</td></tr>
<tr><td>Less: Tax @ 30%</td><td>(11.25)</td></tr>
<tr><td>PAT</td><td>26.25</td></tr>
</table>Like this?</td></tr>
</table>

<table>
<tr><td>Manu</td><td>Yes! Now please compare your old and new PBT, Tax & PAT.</td></tr>
<tr><td>Vinu</td><td><table><tr><th>Particulars</th><th>Old</th><th>New</th></tr><tr><td>PBT</td><td>30.00</td><td>37.50</td></tr><tr><td>Tax</td><td>(9.00)</td><td>(11.25)</td></tr><tr><td>PAT</td><td>21.00</td><td>26.25</td></tr></table></td></tr>
<tr><td>Manu</td><td>Now look at your Tax obligation.
In your old case, your tax was Rs.9.00 Cr where as in new case (without interest), your tax was Rs.11.25 Cr.
You will be forced to pay higher tax if you don’t have interest.
Is that right?</td></tr>
<tr><td>Vinu</td><td>Yes Manu!
When I have interest, my profit was less and I would be obliged to pay only Rs. 9 Cr. as Tax.
When I don’t have interest, my profit will go up and I have to pay more tax in view of higher profits.
My additional tax would be 11.25 - 9.00 Cr = 2.25 Cr.</td></tr>
<tr><td>Manu</td><td>You are right!
Presence of Interest has saved you tax of Rs.2.25 Cr</td></tr>
<tr><td>Vinu</td><td>Yes Manu!</td></tr>
<tr><td>Manu</td><td>Now, come back to our example.
Your interest obligation was 7.50 Cr [50 x 15%]
Your Tax rate is 30%
Presence of 7.50 Cr expense will directly give you 30% tax benefit.</td></tr>
<tr><td>Vinu</td><td>Yes!
By claiming Interest Expense of Rs.7.50 Cr, I will save 30% tax on 7.50 Cr which works out of Rs.2.25 Cr.
Hey it matches with our recent workings!</td></tr>
<tr><td>Manu</td><td>Yes! It would match.
Get back to track now.
You have added back interest to Profit after Tax to find out return out of the project.</td></tr>
<tr><td>Vinu</td><td>Yes!</td></tr>
<tr><td>Manu</td><td>Now my question is, what is exact cash outflow on account of interest?</td></tr>
<tr><td>Vinu</td><td>Hey!! It is 7.50 Cr less tax benefit. Because, I saved Rs.2.25 Cr tax on account of interest.</td></tr>
<tr><td>Manu</td><td>So, what amount you should add back now?</td></tr>
<tr><td>Vinu</td><td>It is Rs.5.25 Cr [7.50 x 70%]
But Manu! We have to add back only what is deducted
In our case, we have deducted Rs.7.50 Cr as expense.
Then how can I add back Rs.5.25 Cr?</td></tr>
</table>

<table>
<tr><td>Manu</td><td>Your question has logic Vinu!
You are now adding back Interest with Profit after Tax to know what is the return available for the project.
If that is the objective, you should add back or deduct all the items related to interest, right?</td></tr>
<tr><td>Vinu</td><td>Yes Manu!</td></tr>
<tr><td>Manu</td><td>You are going to pay tax of 9 Cr which would have been 11.25 Cr, it there is no interest, right?</td></tr>
<tr><td>Vinu</td><td>Yes Manu?</td></tr>
<tr><td>Manu</td><td>So, already your tax figure is adjusted to 9.00 Cr from 11.25 Cr due to presence of Interest, right?</td></tr>
<tr><td>Vinu</td><td>Yes!</td></tr>
<tr><td>Manu</td><td>So add back that also!</td></tr>
<tr><td>Vinu</td><td>Now it makes sense.</td></tr>
<tr><td>Manu</td><td>This tax benefit would be negative figure of – 2.25 and your interest expense will be Rs.7.50 Cr.</td></tr>
<tr><td>Vinu</td><td>Yes! so my effective Interest cost is
<table>
<tr><td>Interest</td><td>7.50</td></tr>
<tr><td>Less: Tax benefit</td><td>2.25</td></tr>
<tr><td>Effective cost</td><td>5.25</td></tr>
</table></td></tr>
<tr><td>Manu</td><td>Good!
Only this cost should be added.
Please continue with your table!</td></tr>
<tr><td>Vinu</td><td><table>
<tr><td>Profit after Tax</td><td>21.00</td></tr>
<tr><td>Add : Effective Interest (7.50 – 2.25)</td><td><u>5.25</u></td></tr>
<tr><td>Profit after Tax before Interest</td><td><u>26.25</u></td></tr>
</table>
Is that correct?</td></tr>
<tr><td>Manu</td><td>Good!
Vinu ! I told you !
It is not profit but the cash generation is important!</td></tr>
<tr><td>Vinu</td><td>Yes!</td></tr>
<tr><td>Manu</td><td>The profit you have derived now is after providing for non-cash expenses like depreciation</td></tr>
<tr><td>Vinu</td><td>So, I should add back that also right?</td></tr>
<tr><td>Manu</td><td>Yes!
Go ahead and complete the cash generation.</td></tr>
</table>

<table>
<tr><td>Vinu</td><td>
<table>
<tr><td>Profit after Tax</td><td>21.00</td></tr>
<tr><td>Add : Effective Interest (7.50 – 2.25)</td><td>5.25</td></tr>
<tr><td>Profit after Tax before Interest</td><td>26.25</td></tr>
<tr><td>Add: Depreciation</td><td>12.50</td></tr>
<tr><td>Profit after Tax before Interest and Depreciation</td><td>38.75</td></tr>
</table>
</td></tr>
<tr><td>Manu</td><td>Good! This is the cash that is generated from the project for a year. We call it as flows from operations.

If you want to know, whether the project which you have taken up at Rs.100 Crs is a viable project, then you have to test, what will be the cash generation for the entire project life.

Only then you will have sufficient information on hand, to take a decision whether or not to go ahead with the project.</td></tr>
</table>

Section 5:

Manu explains how to build projections and derive cash flows for the project life cycle

<table>
<tr><td>Vinu</td><td>Do you mean I have to work out projections?</td></tr>
<tr><td>Manu</td><td>Yes Vinu!
You know your project has life of 8 years.
You have to see, how much the project can earn over its useful life of 8 years and whether the returns it will generate will match your expectations.</td></tr>
<tr><td>Vinu</td><td>Ok! How do we go with the projections?</td></tr>
<tr><td>Manu</td><td>You need to visualise the Sales and expenses for 8 years</td></tr>
<tr><td>Vinu</td><td>Ok! Now I have the above information for one year. Should I extrapolate it for 8 year?</td></tr>
<tr><td>Manu</td><td>Yes!
But pay attention to growth factors, increase or decrease in expenses, etc.</td></tr>
<tr><td>Vinu</td><td>Yes! You are correct.
In this eight years,
-certain expenses will increase with increase in sales;
-certain expenses like interest will come down with the repayment of loans;
-certain other expenses like salary & wages will go up since we have to provide increments.</td></tr>
<tr><td>Manu</td><td>Correct!
-Variable expenses will move along with sales!
-Fixed Expense would remain fixed and
-Expenses like interest would eventually come down.

So go ahead with your projection for 8 years assuming sales to grow 5% every year.</td></tr>
<tr><td>Vinu</td><td>Ok! How about Manufacturing & Operating Expenses.</td></tr>
<tr><td>Manu</td><td>Assume
-60% of your expense are variable. So they will also have 5% increase every year.
-Keep 40% of your expenses as fixed.</td></tr>
<tr><td>Vinu</td><td>Ok! Let me try. I have to increase sales every year by 5%

<table>
<tr><td>Particulars / Year</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td></tr>
<tr><td>Sales</td><td>150</td><td>157.50</td><td>165.38</td><td>173.64</td><td>182.33</td><td>191.44</td><td>201.01</td><td>211.07</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><td>Manu</td><td>You are going good Vinu! For simplicity, let us avoid decimals and round off to next highest number.</td></tr>
<tr><td>Vinu</td><td>Ok Manu!
<u>I'll rework:</u>
<table>
<tr><th>Particulars / Year</th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th></tr>
<tr><td>Sales</td><td>150</td><td>158</td><td>165</td><td>174</td><td>182</td><td>191</td><td>201</td><td>211</td></tr>
</table></td></tr>
<tr><td>Manu</td><td>You know your expenses are Rs.100 Crs.
As discussed split 60% as Variable and 40% as Fixed Expenses in year 1 and keep providing 5% increase for your variable expenses every year.</td></tr>
<tr><td>Vinu</td><td>Ok. I'll do that!
<table>
<tr><th>Particulars / Year</th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th></tr>
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<tr><td>Less:</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Variable Expense (60%)</td><td>(60)</td><td>(63)</td><td>(66)</td><td>(69)</td><td>(72)</td><td>(76)</td><td>(80)</td><td>(84)</td></tr>
<tr><td>Fixed Expense (40%)</td><td>(40)</td><td>(40)</td><td>(40)</td><td>(40)</td><td>(40)</td><td>(40)</td><td>(40)</td><td>(40)</td></tr>
<tr><td>EBDIT</td><td>50</td><td>55</td><td>59</td><td>65</td><td>70</td><td>75</td><td>81</td><td>87</td></tr>
</table></td></tr>
<tr><td>Manu</td><td>Vinu! You have done very well so far.
The EBDIT which you have derived now will be the profits which can be earned without any influence of Debt & Equity structure.</td></tr>
<tr><td>Vinu</td><td>Means?</td></tr>
<tr><td>Manu</td><td>This is the level of profit which any similar business units can earn in the Industry. Because till this point, your profit is decided by operating income which is your sales and your operating expenses which are basically RM, Labour, Power, other production expenses. If you want you can also consider depreciation. In that case, it would be
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<tr><td>EBIT</td><td>37.50</td><td>42.50</td><td>46.50</td><td>52.50</td><td>57.50</td><td>62.50</td><td>68.50</td><td>74.50</td></tr>
</table></td></tr>
<tr><td>Vinu</td><td>Yes! I understand.</td></tr>
<tr><td>Manu</td><td>After EBIT, the profit that is available to owners will be decided by capital structure of business.
If business has more loans, then chunk of EBIT will go for paying interest and you will have very little PBT & PAT.</td></tr>
</table>

<table>
<tr><td>Vinu</td><td>Yes! I can follow.</td></tr>
<tr><td>Manu</td><td>Since I have worked out EBIT, you continue the balance.
You have to account for Interest, and Tax.</td></tr>
<tr><td>Vinu</td><td>Correct.
In our case, whether this 50 Cr Debt will remain for entire 8 Years in the business?</td></tr>
<tr><td>Manu</td><td>No Vinu!
Debt funds like Term loans are repayable over 3-5-8 years
You please assume 8 years repayment.</td></tr>
<tr><td>Vinu</td><td>Whether repayment starts from day one?</td></tr>
<tr><td>Manu</td><td>That’s a good question.
You would need time for project completion & stabilisation in business. So consider one year repayment holiday for principal (which generally bankers would give) and 7 year principal repayment period.</td></tr>
<tr><td>Vinu</td><td>So, my interest on loan will coming down year-after-year right?</td></tr>
<tr><td>Manu</td><td>Yes! It would come down with repayment.
Work out repayment schedule and interest schedule for loan before proceeding further.</td></tr>
<tr><td>Vinu</td><td>Ok! I’ll assume like this:
(Rs. In Cr.)
<table>
<tr><th>Year</th><th>Repayment per year</th><th>Total Repayment</th></tr>
<tr><td>1</td><td>Nil</td><td>Nil</td></tr>
<tr><td>2-7</td><td>7.00</td><td>42.00</td></tr>
<tr><td>8</td><td>8.00</td><td>8.00</td></tr>
<tr><td colspan="2">Total</td><td>50.00</td></tr>
</table></td></tr>
<tr><td>Manu</td><td>Ok! Proceed. Assume you take loan in beginning of the year. Also compute average loan balance for all the years.</td></tr>
<tr><td>Vinu</td><td>
<table>
<tr><th>Particulars / Year</th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th></tr>
<tr><td>a) Opening Balance</td><td>50
(taken in beginning of the year)</td><td>50</td><td>43</td><td>36</td><td>29</td><td>22</td><td>15</td><td>8</td></tr>
<tr><td>b) Fresh Loan</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>c) Less: Repayment</td><td>Nil</td><td>7</td><td>7</td><td>7</td><td>7</td><td>7</td><td>7</td><td>8</td></tr>
<tr><td>d) Closing Balance</td><td>50</td><td>43</td><td>36</td><td>29</td><td>22</td><td>15</td><td>8</td><td>-</td></tr>
</table></td></tr>
</table>

<table>
<tr><td></td><td>
<table>
<tr><td>e) Average Balance</td><td>50</td><td>46.50</td><td>39.50</td><td>32.50</td><td>25.50</td><td>18.50</td><td>11.40</td><td>4.00</td></tr>
</table>
Am I correct? And why do you wanted to calculate Average loan balance?</td></tr>
<tr><td>Manu</td><td>You are correct Vinu!
I wanted you to calculate Average loan balance to estimate Interest on loan.
You can apply Interest on the average balance for forecasting purposes.</td></tr>
<tr><td>Vinu</td><td>Ok! I'll do that!
<table>
<tr><th>Particulars / Year</th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th></tr>
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</table></td></tr>
<tr><td>Manu</td><td>Good!
Already you have EBIT.
Now deduct this Interest to find profit before Tax & after Tax.</td></tr>
<tr><td>Vinu</td><td>Ok I'll proceed.
<table>
<tr><th>Particulars / Year</th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th></tr>
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<tr><td>Profit before Tax</td><td>30.00</td><td>35.52</td><td>40.57</td><td>47.61</td><td>53.67</td><td>59.72</td><td>66.77</td><td>73.90</td></tr>
<tr><td>Less: Tax @ 30%</td><td>(9.00)</td><td>(10.66)</td><td>(12.17)</td><td>(14.28)</td><td>(16.10)</td><td>(17.92)</td><td>(20.03)</td><td>(22.17)</td></tr>
<tr><td>Profit after Tax</td><td>21.00</td><td>24.86</td><td>28.40</td><td>33.33</td><td>37.57</td><td>41.80</td><td>46.74</td><td>51.73</td></tr>
</table></td></tr>
<tr><td>Manu</td><td>Great! You have done wonderful job.
But it's just a starting point for evaluating investment proposals.
Now, you have to find out what will be the cash flows from the project.
But before that, can you bring you entire projection in one place?</td></tr>
</table>

Vinu

Let me do that first!

Particulars / Year	1	2	3	4	5	6	7	8
Sales	150.00	158.00	165.00	174.00	182.00	191.00	201.00	211.00
Less:								
Variable Expense (60%)	(60.00)	(63.00)	(66.00)	(69.00)	(72.00)	(76.00)	(80.00)	(84.00)
Fixed Expense (40%)	(40.00)	(40.00)	(40.00)	(40.00)	(40.00)	(40.00)	(40.00)	(40.00)
EBDIT	**50.00**	**55.00**	**59.00**	**65.00**	**70.00**	**75.00**	**81.00**	**87.00**
Less: Depreciation	12.50	12.50	12.50	12.50	12.50	12.50	12.50	12.50
EBIT	**37.50**	**42.50**	**46.50**	**52.50**	**57.50**	**62.50**	**68.50**	**74.50**
Less: Interest @ 15%	(7.50)	(6.98)	(5.93)	(4.89)	(3.83)	(2.78)	(1.73)	(0.60)
Profit before Tax	**30.00**	**35.52**	**40.57**	**47.61**	**53.67**	**59.72**	**66.77**	**73.90**
Less: Tax @ 30%	(9.00)	(10.66)	(12.17)	(14.28)	(16.10)	(17.92)	(20.03)	(22.17)
Profit after Tax	**21.00**	**24.86**	**28.40**	**33.33**	**37.57**	**41.80**	**46.74**	**51.73**

Manu

It's nice to see all in one place.
Now only the game starts.
You have the information about the earning capacity of your project.
Now you know, how much is your sales, expense, interest, tax, etc.
Now you have to analyse these number to take a decision.

Vinu

Ok!

Manu

First compute cash flows from this project for 8 years.
Hope you already done it for year 1.

Vinu

Ya! I can!
I'll do it.

Cash flow from the project

Particulars / Year	1	2	3	4	5	6	7	8
Profit after Tax	**21.00**	**24.86**	**28.40**	**33.33**	**37.57**	**41.80**	**46.74**	**51.73**
Add: Depreciation	12.50	12.50	12.50	12.50	12.50	12.50	12.50	12.50
Add: Interest @ 15%	7.50	6.98	5.93	4.89	3.83	2.78	1.73	0.60
Less: Tax Benefit	(2.25)	(2.09)	(1.78)	(1.47)	(1.15)	(0.83)	(0.52)	(0.18)
Cash Inflows	38.75	42.25	45.05	49.25	52.75	56.25	60.45	64.65

Manu

You are going fantastic Vinu!

	Now you got the critical details for evaluating the investment proposal. That is ‘cash flows ‘. Your decision depends on accuracy of these cash flows and now you have it right! With this cash flow, we are going to use Capital Budgeting Techniques like a) Payback period; b) Discounted Payback Period; c) Net Present Value Method; d) Internal Rate of Return of Method; e) Accounting / Average Rate of Return Method; f) Profitability Index; g) Modified Internal Rate of Return Method, etc. to evaluate Investment Proposals. We will also discuss how to select a project when there is a conflict between these methods and understand importance of Capital Budgeting Process.
Vinu	So, what we have discussed so far is only tip of an iceberg?
Manu	Yes Vinu! But they are not that difficult. Every technique works on common sense. So, you would be able to understand them without any difficulty.
Vinu	I am eager! Shall we start?
Manu	Yes Vinu!

(The above discussed Capital Budgeting Techniques were published as an eBook “Capital Budgeting Techniques Tete-a-Tete". For more details, contact author below:

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