

Mergers, Acquisitions and Corporate Restructuring
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Lecture - 11
Acquisition Search and Due Diligence - 2

Hello friends, welcome to another session of mergers, acquisition, corporate restructuring. In this particular session and onward, we will be discussing about valuation of companies or valuations of business, in the context of mergers and acquisition. We will talk about valuation as general concept then we will see how valuation can be done in the context mergers, acquisition.

Valuation of company or the business is another one the very important aspects in merger, acquisition. Because at the end of the day it is one company acquires another company. The acquiring company, may like to offer cash in lieu of shares of the target company, or it may also like to offer the give the shares in the company in lieu of shares of the target company. So, finally a consideration has to be paid for the target company.

Similar in case of mergers, when two companies come together and one company is firm so we have to see how many shares will be stored in the most a new entity for the company, let us say company A and B are merged a new company A B is firm. So, how many shares of company A B will be given to the shareholders of company A, for each of their shareholders similarly, for the company B.

So, in that case we have to do a valuation of company A as well as company B and then we will find out a ratio swap ratio etcetera, for which we need a valuation of the companies for that matter. Similarly, when you buy a company, you would like to pay a consideration of the cash or something we will also like the valuation. And so, valuation is one of the important aspects of merger acquisition process.

So, in this particular session, we will talk about generally what is the valuation assets, we will talk about word introduction we will also talk about different rules or principles of premises of valuation.

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Concepts covered

- Introduction to Valuation
- Select rules for Valuation
- Valuation in case of M&A
- Different methods of Valuation
- Valuation Multiples

MERGERS, ACQUISITIONS AND CORPORATE RESTRUCTURING 2

The slide features a white background with a blue and black geometric design on the left. At the top right, there are logos for an institution and NPTEL. A large dark blue arch is positioned on the right side of the slide.

Then we will talk about is the there is anything special in case of valuation, in case of mergers and acquisition because valuation also is used in general market. Suppose, somebody is going to buy a share for trading purpose, shareholding purpose for that matter. They will also, he or she will also like to value the share. Is valuation of share in the normal trading context same as valuation merger acquisition, is there something different assets.

What is the special thing about valuation in the context of mergers and acquisition? Then, we will talk about, mention about different methods of valuation of companies. I will also talk about valuation multiples for that matter.

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Keywords

- Valuation
- Asset based valuation
- Free cash flow
- Dividend discounting
- Relative valuation

MERGERS, ACQUISITIONS AND CORPORATE RESTRUCTURING 3

The slide features a white background with a blue and black geometric design on the left. At the top right, there are logos for an institution and NPTEL. A video inset in the bottom right corner shows a man with glasses and a white shirt speaking.

Then, these are the keywords, valuation, asset-based valuation, free cash flow, dividend discounting model, relative valuation, we will be discussing.

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The slide is titled "Valuation of Company" and features the NPTEL logo in the top right corner. It contains two bullet points: "Valuation is future oriented: fundamentally, intrinsic value of any asset is the present value of future benefits. Investors invest today keeping future in mind." and "Value is not same as price". Handwritten in red ink are the following notes: $FV_0 = f(\text{future benefits accruing to the asset})$, $P_0 = \text{Rs. } 100$, $V_0 \neq \text{Rs. } 100$, and "Intrinsic value". A small video inset in the bottom right shows a man speaking.

Coming to the valuation in general, it is actually future oriented. So, when I am buying a share of any company or anything for that matter, even any property for that matter, I am buying keeping in mind what I am going to get in the future. So, that way, valuation is a function of future. So, because you are paying a value today in the anticipation of some benefits in future.

So, in generic formula, one can say that if I say, valuation today, today's time 0. Then I can say it is a function of future benefits accruing to the asset, that you are actually buying today, so, that is what. So, essentially, we are looking at the future in mind and investors invest today keeping future in mind. And value should not be confused as a price of an asset. So, it is possible the price of particular asset today or maybe let us say share is rupees 100.

But value that is pursued by an investor need not be equal to rupees 100. It can be more; it can be less. Market may price the share at 100 rupees but I may do the valuation as investor I made the valuation, as less than or more than 100. And that is called in that context where you use different valuation method that is called the intrinsic value. What is the worth of the particular investments, share of the company, what is the worth of that intrinsic value?

An intrinsic value can be estimated using different methods, and depending on the circumstances, upon the cases. Valuation is not something one single approach that you can apply and do the valuation is not like that. There are multiple approaches, multiple

assumptions behind that valuation also which will discuss in the subsequent slides, as well as subsequent sessions.

So, one of the thing is that, we have to underline value is not same as price. In fact, if I find a value in this context, I find a value of the share which is more than rupees 100, in that case this being gives an opportunity to buy. Because it is traded a 100, but I feel the intrinsic value is actually more than 100. So, it may be a good target for me to buy. Because I feel for some reason the valuation of the particular share is rupees, more than rupees 100.

Similarly, it is less than 100, then we say that no intrinsic value is less, we may not like to pay the rupees 100. Maybe like to pay a price a value for that less than 100, that we feel is correct as such. But market may price it for some other reason that something more than 100 rupees for that matter.

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Select Rules for Valuation*

- Rule # 1: One has to think like an Investor while finding intrinsic value. Information is the key. One has to know something about the target that the market does not know.
 - "Anyone not aware of the fool in the market probably is the fool in the market" - Warren Buffet (quoted in Michael Lewis, *Liar's Poker*, New York: Norton, 1989, p.35)
- Rule # 2: It is difficult to observe intrinsic value. However, one can estimate it.
 - Concept of Enterprise value vs. Equity value

Handwritten notes:
 $V_e = 1000 - 400 = 600$
Rs. 1,000 cr Enterprise Value
Rs. 400 cr Debt
Assets
Equity

*Adapted from Bruner (2004)

So, there are certain rules of valuation that you adapt from Bruner's 2004 book. Rule number one is that, you have to think as an investor. Because you are going to buy a share by the company, and that case we are going to give something. So, you will like to value an investor and you have to find intrinsic value. So, for this matter, the information about the particular company is the key.

Like we talked about in acquisition search, information is the currency of acquisition. If you have more and more information, then your acquisition charge becomes more perfect, dividends become perfect, also your valuation becomes perfect. So, how much information

you have about the company that is more important assets. So, one has to know something about the target with market might not be knowing.

Markets, so in that case that is the best thing as such because we may find something good about the company, bad about the company for that matter. Accordingly, value and market may not be knowing about it also. So, that surprise element will be there which we might be knowing, and then we do that valuation. So, in fact, if you do not know that much information about the target is going to be very difficult for that matter.

So, there is going to be mis valuation for that particular group context as such. So, that is why, Warren Buffett in one of the cases he said that, any one not aware of the fool in the market probably is the fool in the market itself. So, you have to know about everything about the particular company, on aware is going not to be helpful as such. Rule number two is that, it is difficult to observe intrinsic value, is not so easy assets but one can always estimate the intrinsic value of a company.

Although without that we; cannot proceed further, in fact any investment decision whether merger, acquisition or something, anything for that matter. And in this context, I have to focus on something called the concept of enterprise value and the equity value. So, when we talk about enterprise value, it is the value of the company has a together as such. So, if either simple company, so where the company is financed by both debt and equity and the company has and like I said in the simple balance sheet in assets.

So, when I say value of the company, I say the value of debt, I say the value of equity together gives me the enterprise value, that is one approach. And in fact, enterprise value also can be found out without having the value of debt, value of equity independently by using different mechanism. So, in that case, we will talk about those mechanisms later but it is not necessary that to find the enterprise value you have to also find a value of debt value of equity and add them together.

Enterprise value of a company can be found out independently for that matter. Similarly, suppose I am able to find out the enterprise value of a company, let us say by using a particular approach, I find rupees 1000 crore is the value of enterprise value. And this

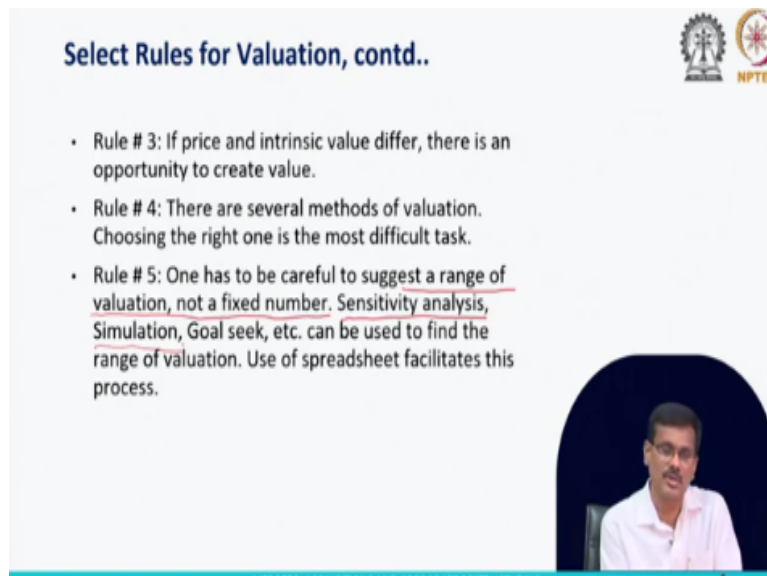
company has a debt of let us say rupees 400 crore then I can say the value of the equity is equal to enterprise value that is 1000 crore - 400, that comes to rupees 600 crore.

So, from enterprise value, if you have the value of debt separately, you can remove it and find value of equity. Then comes the, another is that you can also directly find out the equity value. We need not go for enterprise value, so independently one can find the equity value by applying different methods and mechanism. Then you can find the value of debt then add them together and there that can give us the enterprise value.

So, from the mergers, acquisition point of view typically, we talk about the value of the company while the enterprise for that matter. Then we go for value of equity because at the end of the day when you are taking the ownership of the company you have to pay for the equity holders. So, we find the value of the firm, or the enterprise, or the company as a together, as a one from there you remove the value of outsiders claims like debt and other things.

And then whatever left over that is the value of equity, so that is one. Otherwise, one can also find a value of equity independent of the enterprise value. So, both the approaches are there, and in this particular session and subsequent session we will talk about both valuing the enterprise as well as valuing the equity of a particular company.

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The slide is titled "Select Rules for Valuation, contd.." and features the NPTEL logo in the top right corner. It contains three bullet points:

- Rule # 3: If price and intrinsic value differ, there is an opportunity to create value.
- Rule # 4: There are several methods of valuation. Choosing the right one is the most difficult task.
- Rule # 5: One has to be careful to suggest a range of valuation, not a fixed number. Sensitivity analysis, Simulation, Goal seek, etc. can be used to find the range of valuation. Use of spreadsheet facilitates this process.

In the bottom right corner, there is a video inset showing a man in a white shirt speaking. At the bottom of the slide, the text "MERGERS, ACQUISITIONS AND CORPORATE RESTRUCTURING" is visible.

So, next one, and if the price and interest like we discussed in the previous slide sometime back, the price and intrinsic value differ then there is a opportunity to create value as a

company acquiring company let us say, we are supposed to be creating wealth for the investors, so create value for the investors, so when I value that if my intrinsic value is more than the price, then I should go for that particular investment.

Because I am creating additional wealth because price may be 100 rupees but I got value on my 120 rupees so if I acquire this share at 100 rupees. Actually, I am getting 120 rupees worth investment for 100 rupees. In that case, I create value for the investors. So, otherwise there is no with the price and intrinsic value are same, so there will not be any trading for that matter. Because it is traded at 100 and I feel value is 100.

So, why should I buy that particular share? Similar wise as a shareholder, I should sell that share also. Because price may increase value I may buy and sell this share only for the liquidity purpose. Otherwise for the growth, for the value equation purpose I am not going to buy and sell this share from my intrinsic value is same as price. And next rule, that next principle, next thing is that there are several methods of valuation which will be discussing in subsequent slide.

Choosing the right one is the most difficult task. So, in fact, a consultant, investment banker may suggest different methods of evaluation for one particular stock or company for that matter. So, to see which suits the best, and maybe we may make an average of that. But there is no single metric evaluation which is applicable, useful for everyone in this world for that matter.

Because valuation from the investor point of view depends on the assumptions, the premises that investor has. I being an acquirer, I look at target keeping maybe cost synergy in mind. Another investor makes look at the target, keeping revenue enhancement in mind. So, accordingly, the valuation from my point of view, another point of view can be actually different.

Similarly, I may be one acquiring company, may be expecting the company will grow at X percent. Another acquiring company may estimate the growth to be Y percent. So, these assumptions, the premises, they are going not to be same for all the investors so different investors, different assumptions, different premises. So, finally the end of a different valuation for that matter and that makes actually trading possible.

If the valuation is same from all the investor's point of view, then there will not be any trading opportunity assets. Then once you have done a rule next rule is that, we have to suggest as an investment banker or the valuer for that matter we do not get fixed set rate that its x rupees is the value of the share. No possibly will be saying that, between this and this; the range of valuation, between this and this, so do not suggest a one particular value.


Because most likely that is not going to be the correct value as such, there can be error there. So, instead of suggesting one fixed value as a practitioner, one should suggest a range of value. Maybe, let us say between 100 and 120 per share, you should say rupees 105 for that matter, so like that. Then once you do that, then also as an valuer, either a expert we should be using this spreadsheet model, in a spreadsheet we should change the scenario, we should change the assumptions.

If the assumption is its growth is change; what is equal to value, the growth is going to be lower worth the value. For we may assume different growth rates for the company for next 3 years X percent, subsequent two years Y percent. If those are changing quarterly value, so that is called something called using sensitivity. Supposing, but one of the important parameter change what is going to the value of the particular company or the share that we estimate with original assumptions of premises.


Then one can also simulate, depending different circumstances. We can also go for goal seek in the spreadsheet model, and then do that and finally suggest range of valuation and we should use a spreadsheet, which will also demonstrate in one of the classes how to use a spreadsheet to do the valuation, depending a particular method for that matter. So, one has to be, say so finally you have to suggest a range of valuation not one value for that matter.

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Select Rules for Valuation, contd..



- Rule # 6: Diligently scrutinize the assumptions, data and spreadsheet model.
- Rule # 7: The process of valuation is important, not the value derived out of it.




Next, yes, when you are doing the valuation, there are lot of data we process. We have to very careful about the assumption you have to scrutinize them diligently. We have to scrutinize the data that we are getting for about the company. We have to also see the spreadsheet model is the working properly, the assumption, the formulas etcetera taken care well. So, all those things have to very diligently done by the person.


And it is finally, the process of evaluation important, what we get out of that at the end that is not significant. We will eventually get a valuation, value of particular company, when you share some rupees or some dollar for that matter. But how we do that? What assumptions we have taken? What formulas you adopted? Have you adopted this right formula, right approach or not? So, those are actually important, than what we get out of this valuation for that matter.

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Valuation in the context of M&A



- Valuation in the context of M&A has some unique features
 - Synergy as a source of valuation
 - Concept of corporate control
 - Comparable cases



So, next is that is, valuation something different the context of mergers and acquisition. Because we also do valuation in normal buying and selling and some trading. So, what is that something unique? When company is actually you know talking about merger, acquisition that you discussed in our initial sessions of this particular course, we talked about why do mergers acquisition occur.

So, one of the aspect was that, companies goes for acquisition looking for synergies. They like to reduce the cost; they may like to increase the revenue or do both of them. They like to reduce the cost of capital. So, because of that, maybe when the companies come together the borrowing rate may come down, the finances synergy may take place. So, synergy is one of the more important aspects in evaluation of a particular company in the context of merger acquisition, which you do not do in the context of normal valuation assets.

That is why, M and A valuation is little different from ordinary valuation for that matter. Even if you are estimating something for a company that, what will happen to the revenue, cost etcetera we have to keep synergy also in mind and then the make the estimate. Then when you are doing the valuation for merger, acquisition, unlike buying the shares in the normal market, normal trading, we are actually having a corporate control.

We are going to control the management and the affairs of the company. So, in that case, as a investor, as an acquirer, one will like to pay little higher price than the trading price. Because they are going to have say in the management, there will be corporate box and benefits. So,

they can take a decision in their in the overall favour, what they are thinking they can do that. So, that way you have to look at control assets.

So, some people say that, yes, maybe the company share is traded at, let us say x rupees, one can possibly take that market price as the ultimate benchmark, that is the ultimate price of the share of the company. Because market is supposed to be observing all the information available about that particular company, there is no better value assuming that. But still, since you are at buying this share for as a acquisition.

Because you are going to hold a control over the affairs of the company, we may pay let us say 10, or 20, or 15 percent premium. Acquiring company may have something premium like a control premium. So, that way the valuation in the context of merger acquisition because the; control phenomena is going to be different. Similarly, we will be talking about the relative valuation of the comparable approach, where we value a company looking at a similar company.

Say the similar company is traded at certain times, of certain vital parameter. Let us say, a company is traded at, a similar company traded at the price is 10 times of earnings per share. So, in that case, suppose the earnings per share is high, then the company is traded at, share is traded at ten times since 50 rupees per share. So, if looking at that amount as the comparable company, the example for that matter.

If my company is similar one, if my share is the target companies share is, earnings per share is 4 rupees, then that case if 10 is the price running multiple, we can say that 10 into 4 is actually 40 as the price of the share. But that is valid in the context of day-to-day trading of the share, but not as control, so in that case when you are doing the relative valuation for comparison purposes.

One should look at the mergers acquisition transactions, and what type of multiples relative valuation have found out, that has to be used instead of taking the multiple from the market. So, we will be discussing about those things in one this slide or so. So, because of these three and several other things, valuation in the context of merge is going to something different. Similarly, we may be trying to acquire a company which is really closely held, not listed.

What will be happening there also? We are going to acquire. So, such things are very much prominent in case of mergers acquisition. So, how is going to valuation for that matter? So, these are the things we say that, yes, valuation is something not so similar like in a market nor day-to-day market valuation in the context of mergers and acquisition.

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Different Methods of Valuation (not an exhaustive list)

Asset Based Valuation	Discounted Cash flow based valuation	Relative Valuation# Based on financial measures	Relative Valuation# Based on non-financial measures	Special cases of Valuation
<ul style="list-style-type: none"> • Book value of assets ✓ • Market value of assets • Replacement cost 	<ul style="list-style-type: none"> • Dividend discount model • Free cash flow to firm (FCFF) • Free cash flow to equity (FCFE) 	<ul style="list-style-type: none"> • Price-Earning Multiple • Price to cash flow per share • Price to book value • Enterprise value to EBITDA • Enterprise value to EBITDA 	<ul style="list-style-type: none"> • Enterprise value to installed capacity (select manufacturing sectors) • Enterprise value to Gross Merchandise Value (E-commerce) • Enterprise value to Square Feet Area (Retail Business) 	<ul style="list-style-type: none"> • Valuation of synergies • Valuing privately or closely held firms • Valuation of start-ups • Valuation of intangibles

*Also known as comparable company approach

#Trading vs. Transaction Multiples

$V_A = \frac{PV}{r} = \frac{V_1}{r} + \frac{V_2}{r} + \dots + \frac{V_n}{r}$

$V_A - V_D = V_E$

So, the different approach that we have, in the valuation is a; this is not an exhaustive list. There could be n number of methods also another methods could be there. But for the purpose of this particular course, you will be focusing on these methods which are given a summary here. One of the classic methods of valuation is asset-based valuation method. So, where you look at the assets of the company and by the make the total of assets.

And then from the asset, total assets we remove the debt, whatever leftover is called value of the equity. So, the generic formula is that, value of assets company is called, value of asset 1, value of asset 2, value of asset 3, are like that value of asset n. Suppose the company has n number of assets, so each asset is valued separately. They are together, so we got asset-based valuation and from there whatever you got the asset as valuation.

We take the value of the debt out and then we get value of equity. So, this is the enterprise value based on assets, the value of equity by removing the debt for that matter. Now coming to that, what will be this value? This value could be book value as per the balance sheet. Whatever is there just add those because balance sheet is supposed to be audited. So, take the figure as it is, add them together, remove the debt as per the balance sheet and value of equity is coming.

But the book value of assets are historical in nature. So, they may be purchase long back. Market price may be little more or maybe less, for that it will be more, it may be less. So, the book value being history may not be the right method. So, one may say that, we will go for each of the asset, 1, 2, 3 we will get the market value of this each asset. Then add them together, then find the value of the asset and do that.

So, for example the book value of the assets could be, let us say companies has 2 assets. So, book value of assets could be 10 crore, and 2 assets are there; asset 1 asset 2 and 12 crore per market value of asset 1 could be 15, and market value of asset 2 could be let us say 11. So, as per book value approach, it is going to be 22 horizon market value is going to be; total is going to be 26, that is one.

Because market is supposed to be representing value, to get the market is a right valuation because it also 2 days value of that particular assets that is one. Then we will discuss about more detail cases in subsequent classes. Replacement cost is something where if you replace this asset today in the same condition, how much are you going to spend for that asset. So, that is called replacement cost approach.

So, these are not very easy, this market value replacement cost getting for each of the asset is not going to be easy. But it can be considered as one the method of evaluation if you have the consultants exposed to help you assess. So, it has got certain limitations, which will discuss in subsequent sessions. Then comes another approach is called the discounted cash flow-based valuation.

Where we estimate the cash flow for the future, discount the cash flow to today at a particular rate of return, and then find the value today. So, we can find use to find out the discounting approach for finding the cost value of the equity, well the firm depending on the formula. So, there are 3 formulas, that 3 methods you have request one is called dividend discount model, where you get cash dividend. So, based on dividend you get the value of equity.

Similarly, we also talk about something called free cash flow for the firm and you estimate the free cash flow for several years, you discount them and find the value of the firm. So, here you will get the value of the firm. Similarly, you can also estimate the free cash-flow for

the equity, and discount them and get the value of equity. So, these things, will be discussing in this subsequent session in detail.

Then comes another method is the relative evaluation. So, it is called, it is also known as comparable company approach. So, in this case what we do, we find out the valuation of a particular company based on the certain financial measures. So, what we will do here? We say that, suppose there is a price earning multiple. So, we get the price earning multiple of different similar companies, let us take the average of that.

And multiply the earnings per share of the target company and find out the value of the target company share. Similarly, we can do the relative valuation with the help of earnings per share, cash per share, book value. Then we can also do the valuation of the company together based on EBITDA multiple. We can also have something called sales multiple. So, those things can be there as a valuation enterprise.

So, these are certain things we talk about based on the financial matrix. But these days, we also have valuation with the help of some other non-financial metrics. So, somebody may say that, let us say steel plant, steel company. So, we do not say asset based we say that how much we will give for the install capacity metric to install capacity. So, you have an interface value, based on the metric ton capacity.

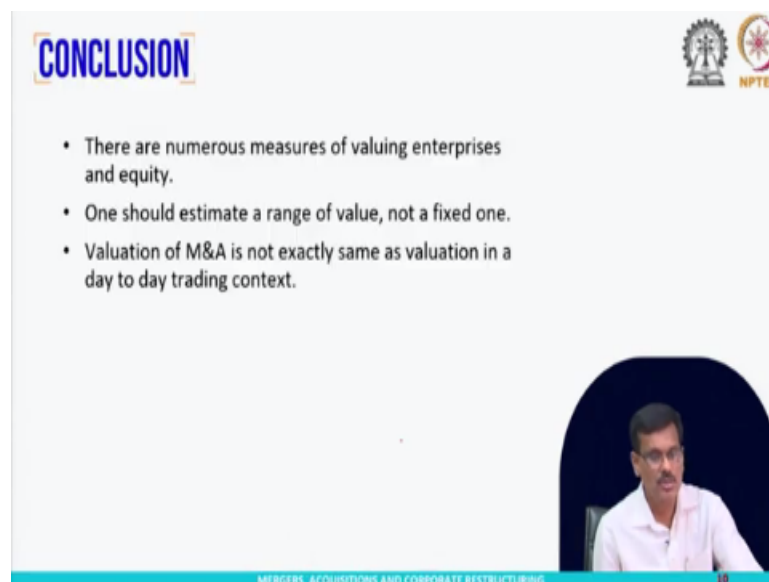
So, if 100 metric ton capacity value is x rupees, then per metric in x by 100. In my company is let us say, 20-ton capacity. Then it is going to multiply into 20. So, they are all manufacturing company install capacity. Now in online companies, the online e-commerce companies, so they now talk about the gross merchandise value. That means, how much transaction are taking place in that particular platform based on the value, so value to GMB multiple.

Similarly, in a retail space we talk about value with respect to the square feet area. Because for a retail company, the area is one of the key driver of revenue for them, so do that. So, those things is or related valuation in the context of non-financial metrics, then there will be space. We will also talk about in these particular subsequent models; we will talk about valuation special cases.

How to value synergies? How to value a closely held company? Are you going to have different methods of valuation of start-ups? Similarly, if the; company has more intangibles, so how to value them assets? So, those are things you want to do. So, these are the things we are going to discuss in subsequent sessions of valuation. And we discussed earlier, when you talk in multiple in a normal market context, we said is a trading multiple.

Whereas in the M and A context, we talk about transaction. When we say transaction, we mean by M and A transaction. So, what is the valuation multiple based on merger acquisition transactions. Find the average in that and use that for finding the value of the company for the merge acquisition purpose.

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The slide features the word 'CONCLUSION' in a blue, outlined font at the top left. In the top right corner, there are two logos: the Indian Institute of Technology (IIT) logo and the NPTEL logo. The main content consists of three bullet points:

- There are numerous measures of valuing enterprises and equity.
- One should estimate a range of value, not a fixed one.
- Valuation of M&A is not exactly same as valuation in a day to day trading context.

In the bottom right corner, there is a circular video inset showing a man with glasses and a white shirt speaking. At the bottom of the slide, there is a teal bar with the text 'MERGERS, ACQUISITIONS AND CORPORATE RESTRUCTURING' and a small '10' in the bottom right corner.

So, in conclusion, we discussed there are numerous measures of valuing enterprises as a valuing equity. So, one should actually estimate the range of value not one fixed value for that matter. And valuation in the context of mergers and acquisition is not the same as valuation in a day-to-day trading context. Thank you, happy learning.