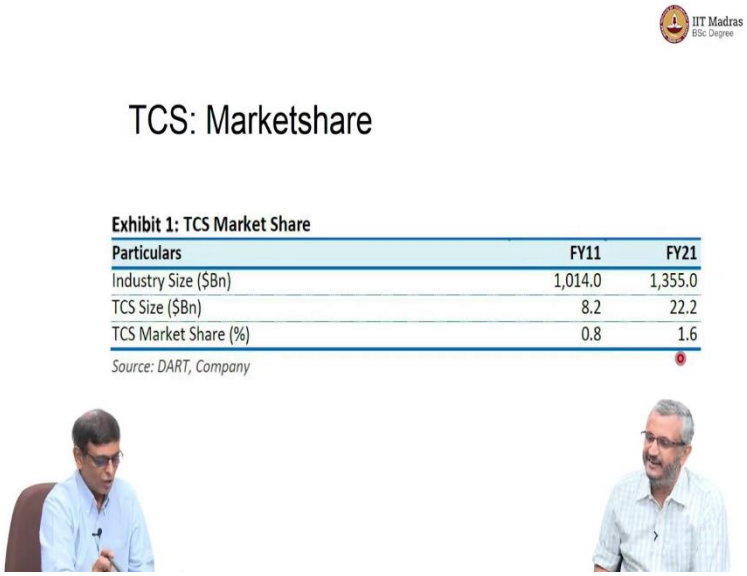
Business Data Management
Professor G. Venkatesh
Professor M Suresh Babu
Department of Humanities and Social Sciences
Indian Institute of Technology, Madras
IT industry - TCS and Summary

(Refer Slide Time: 00:13)



Professor G Venkatesh: Finally, we come to our IT companies.

Professor M Suresh Babu: IT.

Professor G Venkatesh: Favorite IT.

Professor M Suresh Babu: Giant.

Professor G Venkatesh: I am sure many of our students are familiar with this company. It is Tata Consultancy Services. Now, I just thought I would put a slide, which says where TCS stands? And we will, of course, give more time on this when we will discuss the industry. But worldwide, the TCS market share, they say, is 1.6 %. When I show you the other slide, it is a little bit more; this is what this DART is saying. But I think it is like 3 % or between 2 to 3 %. It depends on how you count the total. They have counted it 1.3-trillion-dollars as the size of the industry. Most people estimated about 700-billion-dollars.

So, it depends on what you include and what you do not include. For new products, you will get this share as 1.3 %. So, if you take pure services, it is like 3 %. So, what that means is that TCS is a 22-billion-dollar company that represents only between 2 to 3 % of the world market.

Professor M Suresh Babu: Global market.

Professor G Venkatesh: So, a considerable headroom for growth.

Professor M Suresh Babu: And it is quite promising because, in ten years from 11 to 21, we see that the market share has become doubled.

Professor G Venkatesh: It is keeping on increasing.

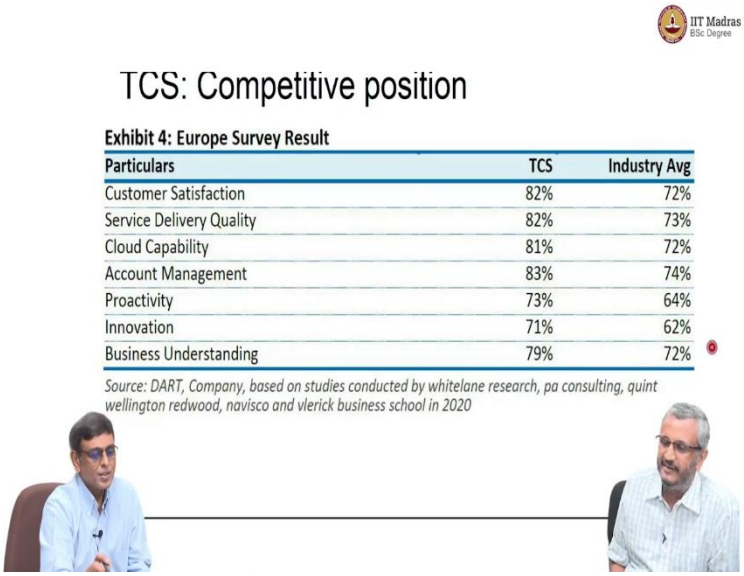
Professor M Suresh Babu: Fantastic.

Professor G Venkatesh: In fact, I have some charts later on. It keeps on increasing.

Professor M Suresh Babu: for one decade, we have been seeing that it has been increasing.

Professor G Venkatesh: In India, its share has been becoming more and more. The industry has been growing from10%, 20 %.

(Refer Slide Time: 01:33)



Professor G Venkatesh: So, we have captured market share. We have basically displaced the incumbents in IT. Also, TCS does much better in many factors than the industry average. For example, customer SAT or delivery quality, how good they are in the cloud? These are some of the vectors that require for industry growth. Are you good in the cloud or AI and machine learning? Better the account management better is the productivity.

Professor M Suresh Babu: Innovation.

Professor G Venkatesh: So, typically, you will see the leader in each segment that they are a leader for a reason. The reason is- if you take any of these kinds of parameters, they will show better numbers than others. So, that also means that if a company is a leader and it is much more favorably positioned on these kinds of parameters than the other companies, then its market share will only increase. And that basically means that smaller companies will eventually have problems. So, the only way for smaller companies to gain market share against the leaders is by innovation- no other way.

Professor M Suresh Babu: Yeah, but here again, TCS's innovation is way above.

Professor G Venkatesh: Yeah. I mean, though they say it. Else, some line of business that TCS is not doing maybe has less share.

Professor M Suresh Babu: They have to get into the thing.

Professor G Venkatesh: They have to get in further.

(Refer Slide Time: 02:48)

TCS: Division performance

Exhibit 9: Vertical Performance Trend

Vertical	Amount ($ mn)	YoY (%) (CC)	Mix (%)	Incremental Revenue ($ mn)	% Contribution of Incremental Revenue
BFSI	7,037	2.4	32	328	231
Communication & Media	1,467	(5.9)	7	(75)	(53)
Retail & CPG	3,195	(6.2)	14	(170)	(120)
Manufacturing	2,123	(4.1)	10	(64)	(45)
Technology & Services	1,937	0.2	9	31	22
Life Sciences and Healthcare	2,157	17.1	10	362	255
Regional Markets & Others	4,258	(5.9)	19	(270)	(190)
T	22,174	(0.8)	100	142	

ART, Company

Professor G Venkatesh: So, this is how most IT companies try to define their business vertical by vertical. So, BFSI is banking and financial services. For example, communication and media, retail, manufacturing, technology and services, life sciences, and regional markets in the Indian market, etc. So, government jobs, and so on.

Professor M Suresh Babu: So, the way to interpret this G V, 32 % of TCS revenue comes from BFSI. Is that correct?

Professor G Venkatesh: In fact, it is true for most IT companies. So, historically BFSI has always been the one that has invested most in IT. Financial services primarily, because innovation can come only by using IT, there is no other way to do innovation. So, I mean, this 32 % is, in fact, lower than what it historically has been for TCS and many other industries. So, it has been higher. It is 40 % or something.

Professor M Suresh Babu: Yeah. So, banking, financial services, and insurance.

Professor G Venkatesh: Insurance.

Professor M Suresh Babu: Insurance too. One small doubt here, GV, is that where does the use of government? Do they have a government portfolio into this?

Professor G Venkatesh: They have a government portfolio. In fact, Infosys also has a government portfolio. But that is shown inside these regional markets and others.

Professor M Suresh Babu: Regional market and others. Okay.

Professor G Venkatesh: It is not a big chunk.

Professor M Suresh Babu: I see. Because, when I go to renew my passport, their Passport Seva Kendra, I think, is TCS, okay.

Professor G Venkatesh: In fact, TCS has some other things, like iON, and that is what.

Professor M Suresh Babu: Testing agencies?

Professor G Venkatesh: that is what we use.

Professor M Suresh Babu: So, maybe life sciences and healthcare might see an increase now after the COVID. There is a possibility.

Professor G Venkatesh: IT is spending now. So, there is a possibility for people who do work in logistics, operations, etc. But we do not know that it has increased or not.

Professor M Suresh Babu: Telemedicine?

Professor G Venkatesh: eah. So, there are niche areas like this, but if you look at the overall IT industry, you tend to track the top 500 IT companies that are spending recorded as Fortune 500. What happens in the Fortune 500 will generally be an indication of how IT is spending? So, if you want to say how the IT industry is going to grow next year, you look at where it is in the Fortune 500? You survey the Fortune 500 companies and ask them how much you are going to spend on IT next year? From that, you make an idea.

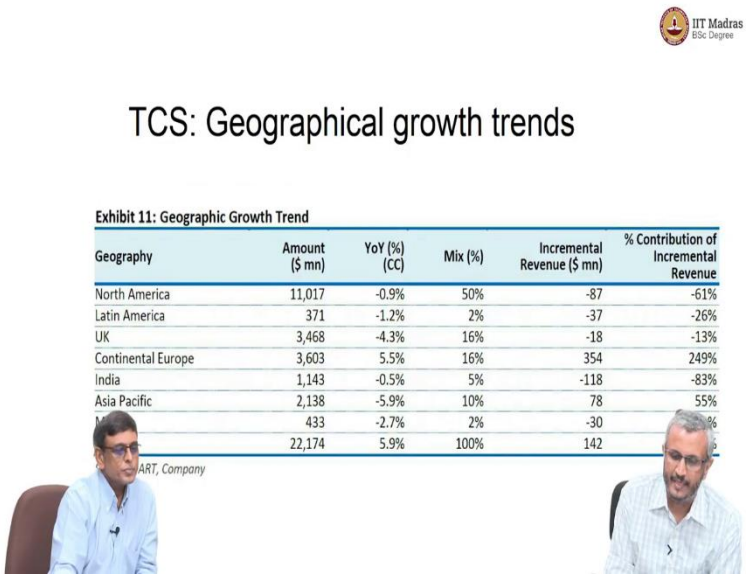
Professor M Suresh Babu: So, these agencies like Gartner and all they produce that kind of reports.

Professor G Venkatesh: IDC and all that, they produce these reports.

Professor M Suresh Babu: Okay. So, that is a good source of data for students if they want to use it.

Professor G Venkatesh: Yeah, a very good source of data.

(Refer Slide Time: 05:10)



Professor G Venkatesh: So, geography wise also you can see some ranks.

Professor M Suresh Babu: Yes. So, North America is.

Professor G Venkatesh: By and large, 50 % of the mix is in North America- just typical. In fact, it is even higher than this in many other companies - maybe 70 % and so.

Professor M Suresh Babu: I see. It is interesting to note that the UK wants to be separate from Continental Europe. Is it the Brexit thing?

Professor G Venkatesh: Even otherwise.

Professor M Suresh Babu: And domestic absorption of IT is quite low-i.e. 5 %.

Professor G Venkatesh: It is only 5 % of TCS business. But TCS's share of IT in India is relatively high because the Indian IT government or whatever, the IT spending per capita in India is less than everything else.

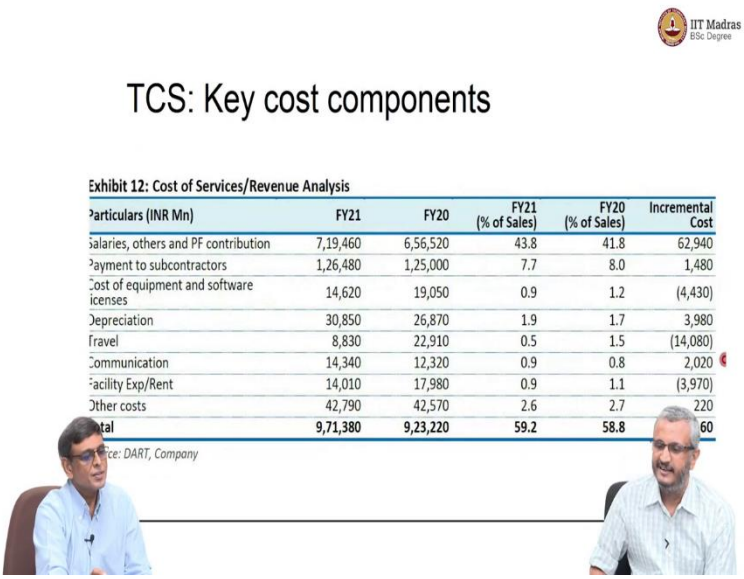
Professor M Suresh Babu: Less.

Professor G Venkatesh: It is extremely low. We have not automated that much. We have to do a lot more automation. I guess we tend to be laborious- we have a lot of labor. Many more people are entering into the labor force also. So, their need for automation is not that much.

Professor M Suresh Babu: And % contribution to incremental revenue, we find Continental Europe actually is contributing quite a bit. Whereas in other areas, there is a decline. In the Asia Pacific, there is an increase.

Professor G Venkatesh: It is kind of an anomaly. I am not sure whether this is something. It may be one order that we got or something.

(Refer Slide Time: 06:28)



Professor G Venkatesh: TCS gets it not, okay. They get it because the TATA has assets in Europe. So, they get this business from those assets.

Professor M Suresh Babu: So, there is a cost of services.

Professor G Venkatesh: How is it broken up? So, you can see, salary is the predominant, 43.8 % of sales is just salary. And then there are subcontractors. It is a big thing for TCS. And as a strategy, many big Indian companies are starting to use subcontracting more and more. Make-buy, you said right, make versus buy. So, rather than making, which is 43.8 %, they are buying.

Professor M Suresh Babu: They are buying these assets.

Professor G Venkatesh: And for specialized skills specifically, it looks very good to do subcontractors, build and in all.

Professor M Suresh Babu: So, I hire a smaller firm, and then I will ask.

Professor G Venkatesh: I will use contractors. I will ask people. I will have full-time engineers. FTE, whatever, I get people from their contractors to look up with my customers. All the others are very small.

Professor M Suresh Babu: So, there is an interesting kind of cost breakup compared to a manufacturing firm because here, in the manufacturing firm, what we find is that fixed assets

and capital investment, land, missionary, buildings all are becoming major, here salaries are becoming very major.

Professor G Venkatesh: Very high.

Professor M Suresh Babu: Major kind of a thing.

Professor G Venkatesh: So, in textiles, you have a little bit of salary. Material cost is there, but salaries have started to become prominent. There is nothing else.

Professor M Suresh Babu: UltraTech, we saw a huge upfront investment, and here, it is a salary that is it. And very interesting to note that the travel thing has also come quite a bit.

Professor G Venkatesh: Because of COVID.

Professor M Suresh Babu: 0.5 % of the sales.

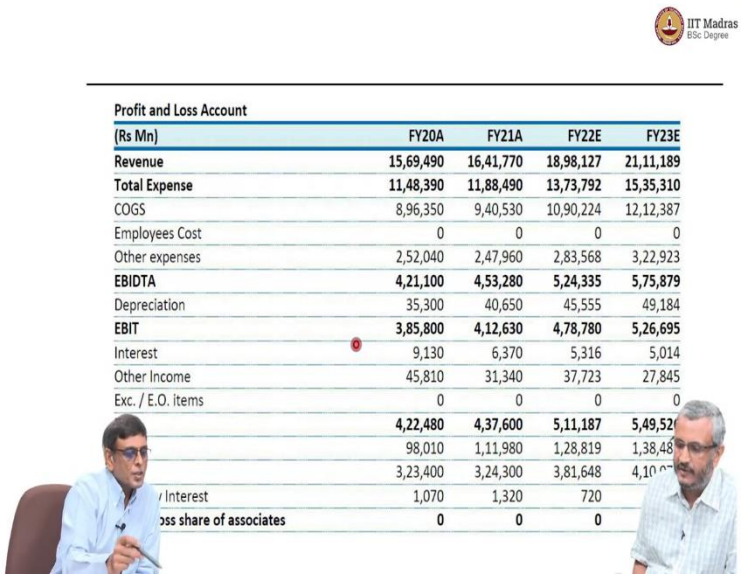
Professor G Venkatesh: So, from 22,910 crores to only 8,000 crores.

Professor M Suresh Babu: Yeah. 8,000 has come down.

Professor G Venkatesh: Especially, foreign travel is costly. So, generally, it has to be a massive bill. Airlines stopped working now. Even other means of transportations too stopped working. You could not travel.

Professor M Suresh Babu: I think contrasting to it, the manufacturing firms give us an exciting kind of picture.

(Refer Slide Time: 08:42)



Professor G Venkatesh: Right. I think we have seen this already. Let us discuss.

Professor M Suresh Babu: Profit and loss account.

Professor G Venkatesh: So, you would not see any interest costs. There is some interest cost, but it has a small positive sales. Hence, depreciation also will be very small because there is not that much capital employed. So, interest and depreciation are extremely small. That is why you see that from the EBITDA line for 4,21,000 crores if you go to the net profit line more or less, you get the same number. The only tax is the one that kills it. So, from 4,22,000 you pay 98,000 and you get 3,23,000. But interest and depreciation are so small that you can almost ignore them in IT companies.

Professor M Suresh Babu: But why the employee cost is not accounted for this?

Professor G Venkatesh: They already put it in the COGS (cost of goods sold).

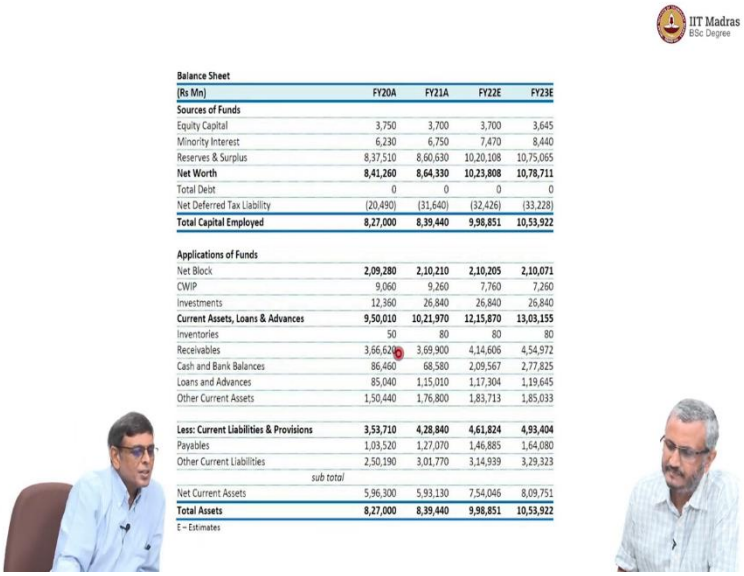
Professor M Suresh Babu: So, that is how they are accounting in that.

Professor G Venkatesh: Because employees are costly.

Professor M Suresh Babu: Exactly.

Professor G Venkatesh: So, all the employee costs are typically allocated in IT company.

(Refer Slide Time: 09:42)



Professor G Venkatesh: It is all being allocated. So, from a balance sheet perspective, you can see that their equity and reserves, that is, total money raised from equity, is about 20,8,41,000 crores, and the debt is zero.

Professor M Suresh Babu: So, it is a zero-debt company.

Professor G Venkatesh: Yes. It is a zero-debt company.

Professor M Suresh Babu: Phenomenal.

Professor G Venkatesh: Because you produce so much cash. Why do you need debt?

Professor M Suresh Babu: I see.

Professor G Venkatesh: In fact, banks chase IT companies to give money. Because it is a very safe company to lend money, but they do not need the money.

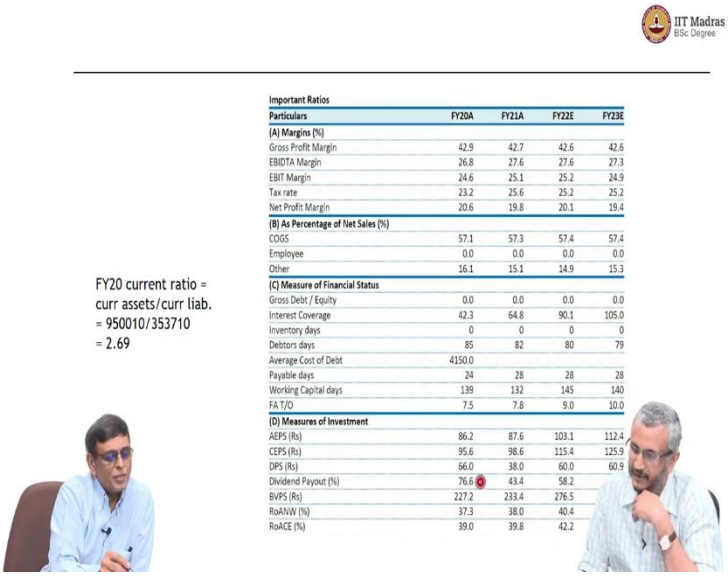
Professor M Suresh Babu: Yeah. So, that is why there is not much difference between the EBITDA and the other margin. And because interest payments are not there.

Professor G Venkatesh: And, again, you can see most of it is receivable. Most of the money invested is receivable. So, typically 40, 45 days of credit will be there. So, that is where most of your money is locked now. Other than that, there is nothing else. It is again another cash machine. You can see this.

Professor M Suresh Babu: Margins.

Professor G Venkatesh: Did I have the cash flow statement? I will show you the cash flow now.

(Refer Slide Time: 10:53)



Professor G Venkatesh: So again, you can look at the ratios. So, here, in this case, the current ratio is 2.69.

Professor M Suresh Babu: That is way above what we talked about it.

Professor G Venkatesh: Because you know, I mean, it is an IT industry and is phenomenal from financial matter.

Professor M Suresh Babu: Again, as we saw earlier, the ratios are organized in terms of margins, financials as well as investments.

Professor G Venkatesh: So, you can see the gross profit margin is around 42 %. The EBITDA is approximately 27 %. So, those companies are about 20, right. It is 27. And net profit margin is 20.6. So, in 20 to 25 % profit margin, a net profit margin is definitely possible in the IT industry. Though, the companies which are growing very fast might have a slightly lower margin, 14%, 15 to 20 %. But 20 to 25 % is considered to be a good margin.

Professor M Suresh Babu: And zero inventory days.

Professor G Venkatesh: No inventory is seen. But you see, the debtor is 85 % which means, these guys are giving nearly 3 months of credit to their customers.

Professor M Suresh Babu: Even that is not bad. So, there is a decline.

Professor G Venkatesh: But I mean, it is there. I think it is somewhat many companies these debtor days have declined also. For TCS, it does not seem to has dropped that much.

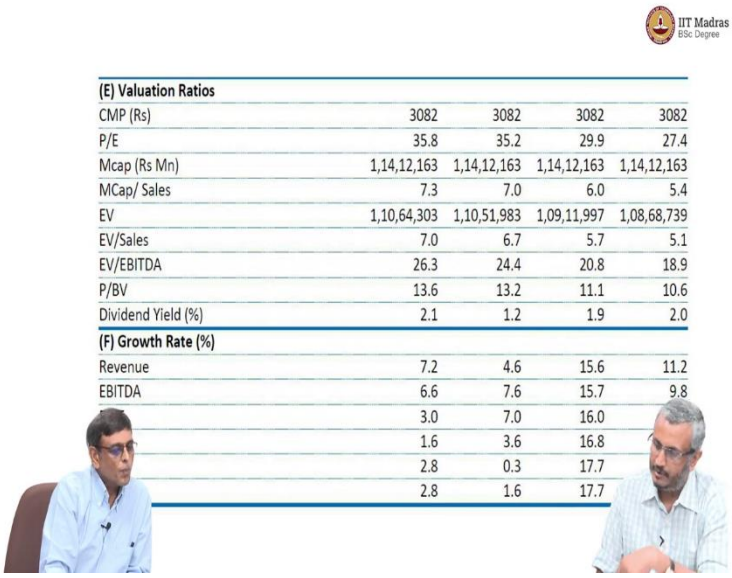
Professor M Suresh Babu: And dividend payout percentage is relatively high.

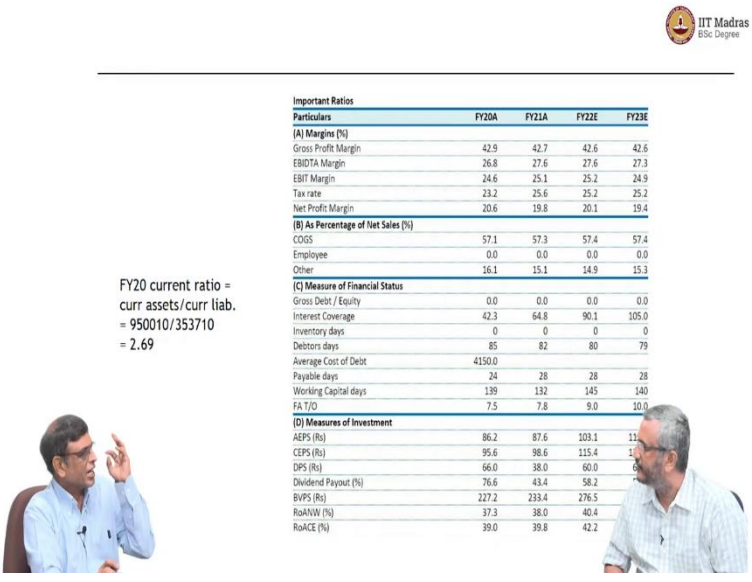
Professor G Venkatesh: They payout.

Professor M Suresh Babu: So, suitable for a retail investor.

Professor G Venkatesh: Not that much. If you look at the cash they are generating, they do not give out that much dividend compared to the cash they are generating.

(Refer Slide Time: 12:18)





Professor M Suresh Babu: And these are the valuation ratios.

Professor G Venkatesh: Huge valuations.

Professor M Suresh Babu: Earnings per share are relatively high.

Professor G Venkatesh: I did not capture the ROCE, isn't it?

Professor M Suresh Babu: No. Go back.

Professor G Venkatesh: I think I did.

Professor M Suresh Babu: There is this.

Professor G Venkatesh: There, it is the return on adjusted capital.

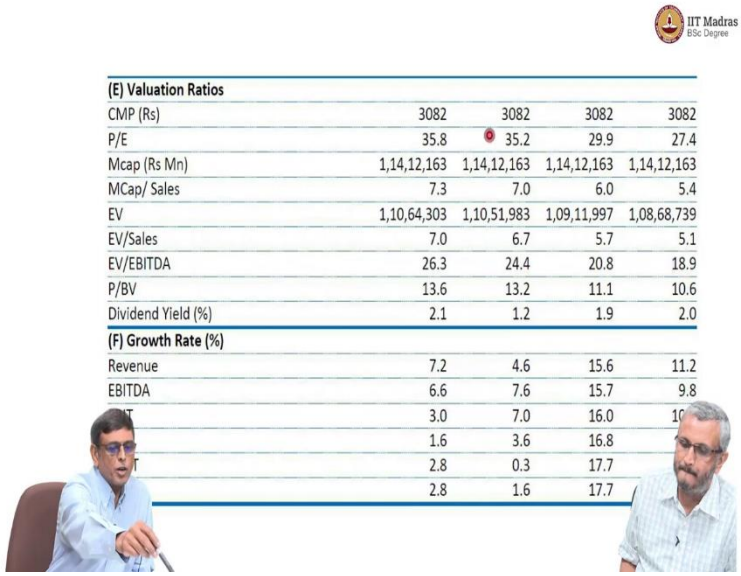
Professor M Suresh Babu: Capital.

Professor G Venkatesh: Yeah. So, that is like 40 %. 39 to 40 %.

Professor M Suresh Babu: Yeah.

Professor G Venkatesh: And the reason why it is 39 to 40 % is that because TCS is sitting on lots of cash. So, they have so much money that they have been employing it in their businesses. Actually, they are not doing anything with it; it is just sitting. IT companies are sitting on lots of cash because they want to prepare; they want to keep it, as they call it dry powder- dry gun powder. You are trying to keep it for, waiting for opportunities, acquisition. Some consolidation may happen you want to use it. So, they keep it. So, because of that, the return on capital is lower. If they kept only that much cash required for running their operation, it would be like Nestle's 120 % ROCE would be there.

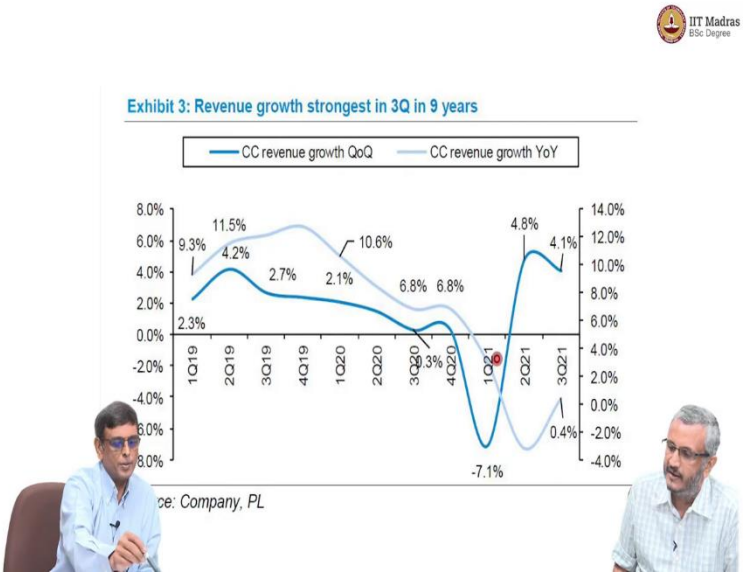
(Refer Slide Time: 13:30)

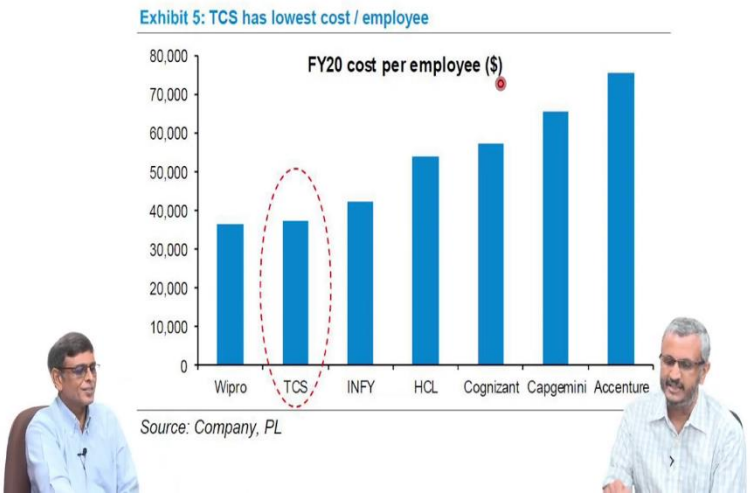


Professor M Suresh Babu: Dividend yield is also quite a high percentage. And, price-earnings ratio is relatively high.

Professor G Venkatesh: The price-earnings ratio is around 35 %. Because people expect now that TCS will grow to about 10 to 15 %, that is why they are giving at a higher price.

(Refer Slide Time: 13:57)





Professor G Venkatesh: I think that is about it. The rest of it is all some kind of operational chart. So, you can see that revenue growth is starting to pick up. I think. So, their costs are well managed. TCS is historically has been known as a company that manages cost. It is extremely well managed at its expense compared to other companies in the industry. Accenture is an international company, and Capgemini is European. Accenture is in the U.S., whereas Cognizant is an Indian company headquartered in the U.S., and these are Indian companies. So, you see that TCS is among the best cost managed.

Professor M Suresh Babu: So, cost per employee is? So, we interpret it like 30,000 rupees is or whatever is the cost per dollar.

Professor G Venkatesh: Per year.

Professor M Suresh Babu: Per year is the cost per employee.

Professor G Venkatesh: Total loaded cost.

Professor M Suresh Babu: Total loaded cost.

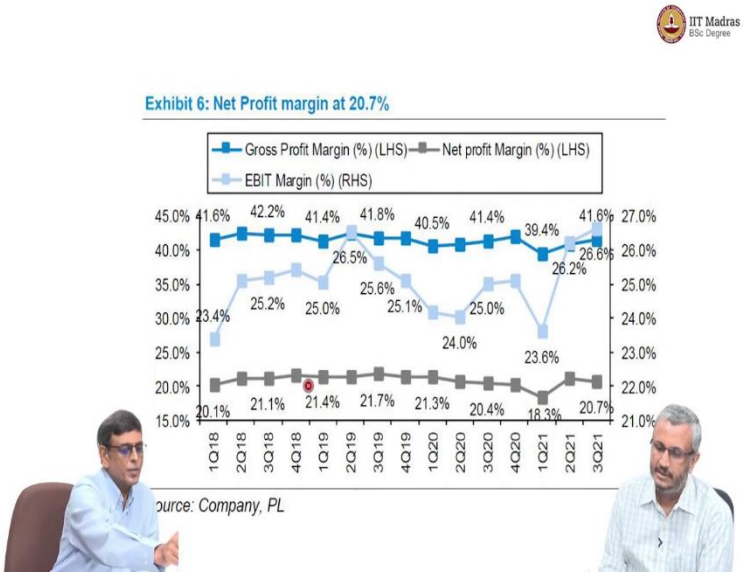
Professor G Venkatesh: Take all the costs and load it on the number of employees.

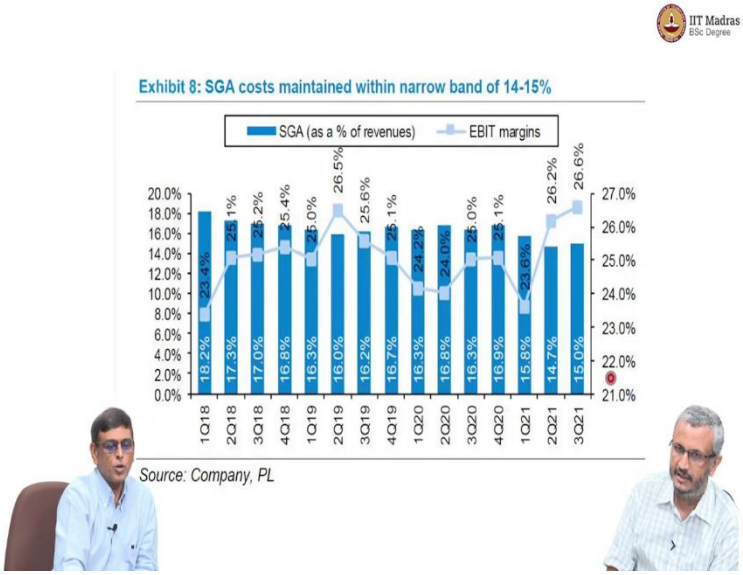
Professor M Suresh Babu: Whereas, for Accenture, it is double.

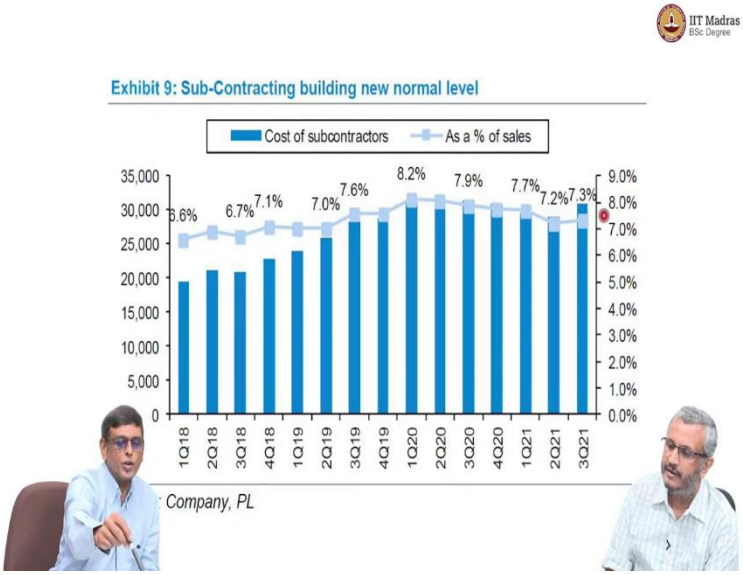
Professor G Venkatesh: Almost double.

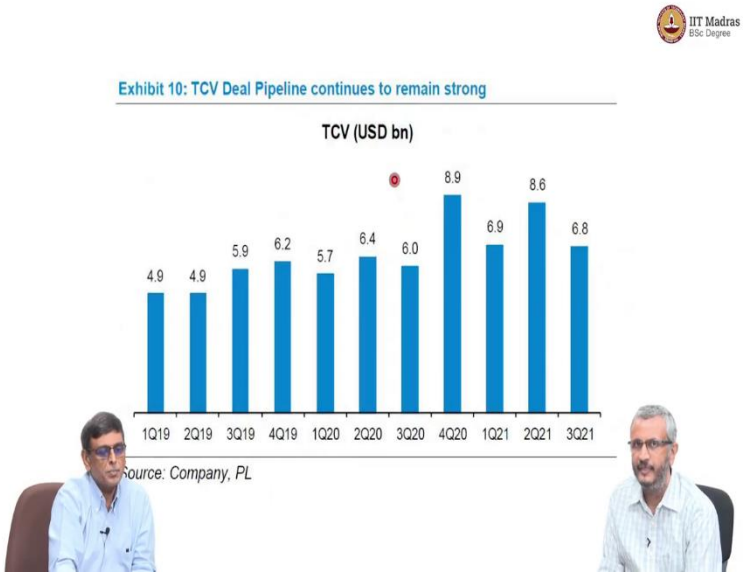
Professor M Suresh Babu: Yeah, kind of.

(Refer Slide Time: 14:59)









Professor G Venkatesh: And net profit margin has been hovering in this range for a long time. And SG&A costs are also narrowband. It is also well managed, and they have started subcontracting quite a lot now. So, you can see it was 6-odd %; now it is 7-odd %. So, they are kind of slowly increasing subcontracting and even went to 8 %. I think this industry will start looking more and more at subcontracting.

Professor M Suresh Babu: Subcontracting.

Professor G Venkatesh: As a means, they have much better control over this aspect, called total contract value. So, this tells you the deal pipeline; how many contracts are they winning, and so on? So, the only way to get a view of what the future revenues of this company are going to be is in terms of looking at its order book, just like any project management. For L&T also, you do the same thing. So, you would basically look at how many contracts they have won. So, the deal pipeline looks promising. So, you can see that they are winning many more deals, bigger deals.

Professor M Suresh Babu: So, this is a total contract value.

Professor G Venkatesh: Yeah. It is the total contract value. Contracted deals- all their contracts that they have written with customers and the worth of that.

Professor M Suresh Babu: So, this is, for example, the 6.8 billion U.S. dollars. I would interpret it as of now in the last quarter, that is 3Q of 21, TCS had got into a contract of 6.8 billion U.S. dollars. So, that is a kind of an assured income for them because you have already contracted.

Professor G Venkatesh: If you take these four quarters and add them up, you will get some idea of the subsequent four-quarter revenues.

Professor M Suresh Babu: That is a fascinating kind of thing. Right.

Professor G Venkatesh: And usually, these contracts are long; many of them are long-term contracts.

Professor M Suresh Babu: Whereas, in manufacturing, you cannot do this because you do not know what is the demand going to be? Here you are having an upfront contract because it is a service kind of thing.

Professor G Venkatesh: Correct.

Professor M Suresh Babu: So, they are.

Professor G Venkatesh: But manufacturing services or engineering contracting companies?

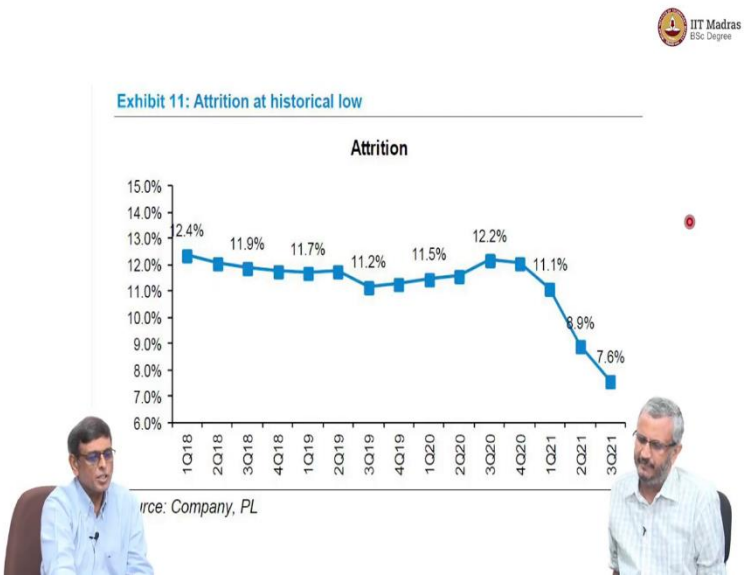
Professor M Suresh Babu: That is different.

Professor G Venkatesh: For example, your roads. As L&T is doing metro rail or roads or something like that, there are lots you can do this contract value.

Professor M Suresh Babu: Construction companies.

Professor G Venkatesh: Construction companies, or BHEL power equipment. Companies like that.

(Refer Slide Time: 17:24)



Professor G Venkatesh: Attention is come down. But if you draw inferences for a long time, you will get a new picture. It has gone up again, but it is kind of came down during the core time edition. Historically, around 11-12 %.

Professor M Suresh Babu: 11-12 %. So, the industry.

Professor G Venkatesh: Now it has gone back to 11-12 %. And probably.

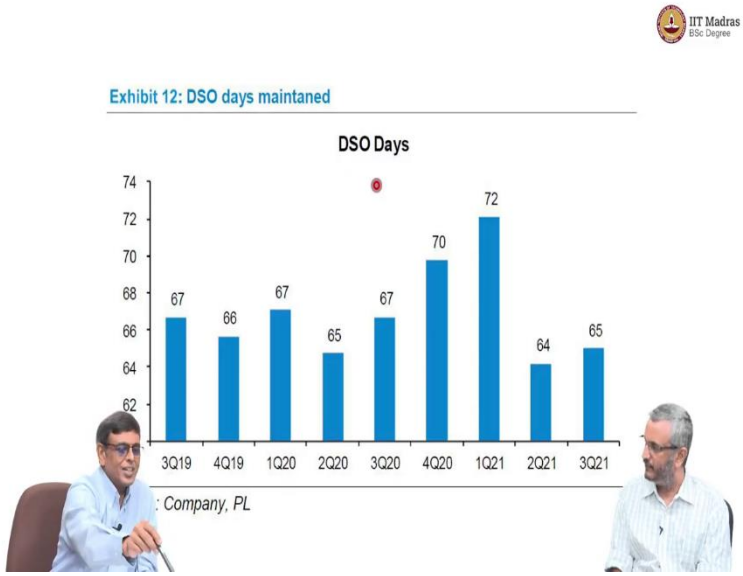
Professor M Suresh Babu: The industry average is close to 10 %?

Professor G Venkatesh: No, some smaller companies have attrition.

Professor M Suresh Babu: Higher.

Professor G Venkatesh: Bigger companies have lower attrition because they are sitting on a much bigger pool.

(Refer Slide Time: 17:53)



Professor G Venkatesh: So many people can't leave the company. Where do they go? So, that is the thing. So, DSO days have improved, as I explained. It was 72 during the pandemic, and of course, we saw somewhere 80 as well. It is a different chart, I think.

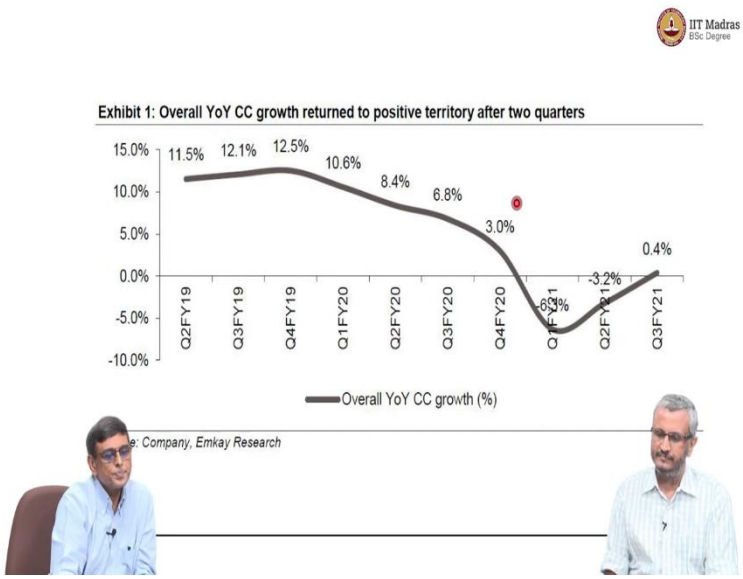
Professor M Suresh Babu: DSO means what GV?

Professor G Venkatesh: DSO is days of sales that basically means, how many debtor days?

Professor M Suresh Babu: Yeah, debtor days.

Professor G Venkatesh: But there were some 88 days. I do not know; this seems to be a different company. Generally, the DSO has declined what they have shown us.

(Refer Slide Time: 18:25)



Professor G Venkatesh: I would not just show you this last chart, but we will see it more when we see the industry trends. But this shows basically what the billing rate is. The billing rate usually in IT is built-in per hour rates like consulting and lawyers. So, the bill is in hours. So, a business analyst in the United States charges 110 to 205 dollars per hour whereas, in Asia, which includes India, it is only 30 to 40.

Professor M Suresh Babu: Oh, my god!

Professor G Venkatesh: We still have what is called a cost arbitrage, right.

Professor M Suresh Babu: Yes.

Professor G Venkatesh: So, take a QA guy, for example, a junior QA's quality analysis. For testing, you spend roughly 80 dollars in the US, whereas you will spend only 15 to 20 in India. You will see a 3 to 4 times difference between US and Indian rates. So, that steep decline in rates will push business to India, and it is called offshoring.

You will see this offshoring time, primarily because there is a change in the billing rates. So, from here to here. So, Eastern Europe is another competitive place, but still, it is 50 % more than India. Therefore, some people work in Eastern Europe, but they also come to India depending on their talent.

Professor M Suresh Babu: I see.

Professor G Venkatesh: So, this will keep going for another ten years.

Professor M Suresh Babu: I see. So, if we have to name some countries GV in Latin America, what could be the countries? Who is the IT major?

Professor G Venkatesh: Not very big. Mexico, for example.

Professor M Suresh Babu: Mexico.

Professor G Venkatesh: And again, you will find Indian companies with headquarter operations here. Indian companies have set up things in Brazil. TCS has operations in many countries, including Brazil, Mexico, and others. So, they operate from there.

Professor M Suresh Babu: And Eastern Europe, what are the countries like that?

Professor G Venkatesh: Eastern Europe, you have Belarus, for example. It is one city where you have a lot of things. You have Ukraine.

Professor M Suresh Babu: Poland?

Professor G Venkatesh: Poland is a bit expensive. But, Latvia, all these, I mean, the problem in Eastern Europe is that you cannot find enough people. You can set up a center for 200, 300 people. But if you want to do a much larger operation and it is challenging.

Professor M Suresh Babu: You can scale it up.

Professor G Venkatesh: The quality of people is quite good.

Professor M Suresh Babu: So, this is good; this is the kind of driving force in terms of the industry's growth in India. And in India we have this cost advantage.

Professor G Venkatesh: Cost advantage. Yeah.

Professor M Suresh Babu: That is the number 1. Number 2, a large pool of resources in terms of the workforce is readily available in India. And I think this is a very, very interesting kind of engagement with numbers. Because in the earlier discussions, what we had was just to show the DRAI ratios, and now, we can draw some inferences using those ratios and numbers. So, if we have to draw some inferences, there are wide inter-industry variations in terms of profits.

Professor G Venkatesh: Profit margins.

Professor M Suresh Babu: Profit margins are a function of the type of industry, which is also related to the kind of quantum of capital and that type of capital that gets employed. And that is where our analysis of cost into fixed, variable, and things of that sort becomes very relevant. The second thing that I could understand from this is that we use economic and accounting costs.

Now, we find that the accounting costs give us a very detailed breakdown in terms of costs. And then once we use accounting cost, then perhaps, you get the final aspects of costs involved in terms of production and sales of goods, yeah. Now the third thing is very interesting that depending on the type of industry, labor cost varies, and that gives us an idea of whether the production. Remember, we talked about the production function.

Professor G Venkatesh: Function.

Professor M Suresh Babu: When production function captures this relationship between inputs and outputs, then looking at these labor costs, we can infer something about the underlying technology of production and the production function. And we find that certain industries like textiles are more labor-intensive, whereas cement and other industries are capital-intensive. So, depending on that, we find that the costs are also varying.

The fourth interesting kind of inference, which I could draw, G.V., is the kind of capacity utilization variations one could have in terms of demand. For example, in cement, we find that there is very high upfront capacity installed, and according to seasonal variations, you can use that capacity over time. Whereas, in textiles, you will have to hire people immediately for the basic labor-intensive operations and then expand accordingly. But in textiles, they adjust for

this capacity or seasonal variations in demand; they stock inventories more and release them into the market as and when there is seasonal variation. And finally, we saw critical and the bottom line in terms of return on capital employed.

Professor G Venkatesh: How far it is?

Professor M Suresh Babu: Ultimately, for any investor, whether it is an entrepreneur or whether it is retail investor, the bottom line is in terms of the return on capital employed. And we find variations across industries as well as across firms on return on capital employed. And how they are improving the return on capital employed over time in terms of cost reductions. So, I think then.

Professor G Venkatesh: And how do they use the cash?

Professor M Suresh Babu: How do they use the cash?

Professor G Venkatesh: Some are giving it back.

Professor M Suresh Babu: Some are giving it back.

Professor G Venkatesh: Some are without flowing it into their business. Like cement is flowing it back, we saw that. Now it is plugging it back. Some are using it to reduce the debt.

Professor M Suresh Babu: They reduced the debt to reduce interest payments in the next day's period. So, I think all of these sums up our analysis of profits, profitability, and costs. Now, in the next step, we shall move from a firm-level analysis to an industry-level analysis so that we can have a broader macro kind of perspective.