Working Capital Management

Dr. Anil K. Sharma
Department of Management Studies
Indian Institute of Technology-Roorkee

Lecture - 03
Nature of Working Capital Management

Welcome students. So in the previous 2 classes we were trying to understand the balance sheet and the lower part of the balance sheet and especially the current asset and current liability part and there I could I think clarify and I could make you understand that why the lower part of the balance sheet is important and to properly manage the current assets and current liabilities, how important it is right.

Now, once we have understood the management of current asset's and current liability's need it means we have understood there is a need for managing the working capital or the short term funds properly. So it means now we are moving ahead on the ladder and we are trying to understand what is the nature of working capital management.

(Refer Slide Time: 01:18)

The Nature

- Working capital management is a significant part of financial management due to the fact that it plays a pivotal role in keeping the wheels of business enterprise running. It is concerned with short term financial decision making. Neglecting the proper management of working capital has caused many businesses to fail and in many cases, has retarded their growth. Lack of efficient and effective utilization of working capital leads to earn low rate of return on capital employed or even compels to sustain losses. The need of efficient working capital management has thus become greater in recent years.

As it is clearly written here that what is the nature of working capital management and if you think about that working capital management number 1 even you forget the nature is a very dynamic subject. You cannot plan for once and use it for years. You have to plan for everyday.

You have to plan every day in the morning certain things that today I am going to do this and I have to be ready for that.

Time horizon can be 1 month. It can be 15 days. It can be 1 week for the budgeting. But you have to very say vigilant, clear, and means clearly understanding everything that what I am expected to do today and I should be efficiently discharging my duties as finance manager or part of the finance department or maybe the CFO of the company.

So if you look at this what is the this working capital management if you talk about, nature of the working capital management, working capital management is a significant part of financial management due to the fact that it plays a pivotal role in keeping the wheels of business enterprise running. It is concerned with short term financial decision making. Neglecting the proper management of working capital has caused many businesses to fail and in many cases has retarded their growth.

I am again reading that working capital management is a significant part of financial management due to the fact that it plays a pivotal role in keeping the wheels of business enterprise running. Business enterprise is running only because of the working capital management. You have huge plant, building, machinery everything is with us but there is no raw material. What is the use of that people?

There are no people, no workers to run the plant. What is the use of that plant? What is the use of those buildings? What is the use of that furniture? You do not have the power. You do not have the water. You do not have the lubricants. It means if you want to keep the wheels of business ready going on you need to have sufficient working capital. But if you increase the level of current assets you are increasing your cost.

So and if you are reducing it below a level you are into the risk of the technical insolvency of the firm. So you have to keep the optimum level of the current assets and for that you need the optimum level of working capital. It is concerned with short term financial decision making; how

much raw material we need, how much workers we need, how much power we need, how much water we need, how much other lubricants inputs we need.

Neglecting the proper management of working capital has caused many businesses to fail and in many cases has retarded their growth. I can tell you number of companies who if they are very efficient and if they are not properly managing their working capital, many times they are out of stock. So they are paying a stock out cost. And there are certain companies who are not very efficient because of say especially after 1991 with the globalization of Indian economy this total manufacturing sector sphere has changed.

Those sectors which were closed for the public sector earlier only now they are open for the private sector. Now for example you take the example of steel sector. Earlier Steel Authority of India was manufacturing the steel for the entire nation. Today, we have number of companies manufacturing steel in the different parts of the country. So they have snatched the half of the market of SAIL.

So SAIL's manufacturing facility is same but their market has gone down by 50%. It means what is happening, inventories are mounting because they cannot stop the production process. They have huge manpower. They have huge plants, buildings, and huge public say assets. If they stop using those fixed assets, long term assets their losses will otherwise magnify. So they have to manufacture. Manufacturing process is continuously going on.

But they have lost 50% of the market. So what is happening? Their inventories are mounting. When their inventory is mounting, inventory of the finished product is mounting, it means there is the issue of the mismanagement of the working capital. They have huge inventory of the finished goods. Now you need the funds to support that inventory and you are not able to sell that inventory in the market as and when you wanted, it is creating a problem.

So it means in this case neglecting the proper management of working capital has caused many businesses to fail and in many cases has retarded their growth. Lack of efficient and effective utilization of working capital leads to earn low rate of return. If you are keeping huge amount of

current assets that you want to remain safe, that my raw material is always there, my power is there, my workers are there, everybody is there.

You are selling too much on the credit to have the maximum market or the larger market share; you need huge amount of working capital. You have to create the large amount of current assets and I told you they are least productive. So what will happen? Your losses build. That is the efficient management of the working capital and that is called as the lack of management of the working capital.

Lack of efficient and effective utilization of working capital leads to low rate of return on capital employed even or even on the capital employed or even compels to sustain the losses. When the cost of maintaining those assets increases and funds are say the financial cost is also very high so the loses will increase. The need of efficient working capital management has thus become greater in the recent years right.

Now next thing is the working capital management is concerned with the problems that arise in attempting to managing the current assets, current liabilities and the interrelationship that exists between these two that is the current assets and current liabilities and that is why we call it as say quite dynamic in nature. Management of working capital is quite dynamic in nature because you sometime you have to plan on daily basis.

How much payments I am going to make. How much sales I am going to make. How much funds I am going to collect today. How much payment I am going to make today. How much raw materials is required. How much say raw material it is in transit. When it is going to arrive to us or reach in the store. Every day we have to be careful. If you are not that much careful you are not managing your working capital efficiently and you are going to increase the losses of the firm because the cost to manage the current assets is going to increase.

Now let us understand it from different perspectives. Definitions of working capital. You might have heard about the working capital in 2 ways. One is the gross working capital and second is the net working capital.

(Refer Slide Time: 08:21)

Definitions

There are two concepts of working capital: Gross and Net.

- Gross working capital = Total Current Assets

- Net Working Capital =

  - Current Assets – Current Liabilities
  - NWC is that portion of current assets which is financed with long term funds

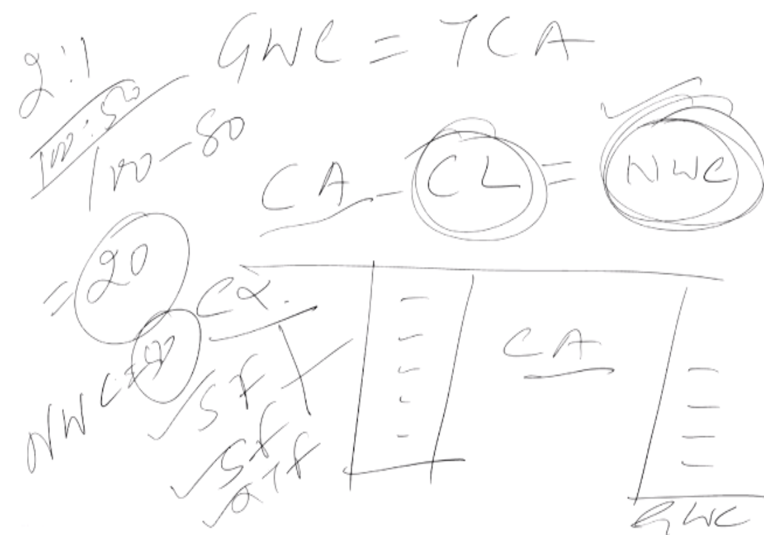
The task of financial manager in managing working capital efficiently is to ensure sufficient liquidity in the operations of the enterprise.

Gross working capital means total of the current assets. It is from the asset side of the balance sheet. Total of the current assets is called as gross working capital. All current assets, inventory, credit sales, debtors, bills payable, prepaid expenses, advance deposits, cash in hand, cash at bank. If you total it up without not taking into account the liability side of the balance sheet, only the total of current assets is called as the gross working capital.

But out of those assets if you subtract the current liabilities from the liability side of the balance sheet then what is the difference that is current assets minus current liabilities that is called as the net working capital. So gross working capital, net working capital we have the 2 concepts. Lastly, when you talk about the working capital we will be referring to in the say next part of discussion about the net working capital that is the current assets minus current liabilities.

So net working capital finally, if you talk about the net working capital you say that current assets and current liabilities. So it means we have the current assets and we have the current liabilities. So if you have the if you want to talk about the current assets and current liabilities.

(Refer Slide Time: 09:39)



It means current assets minus current liabilities, this becomes the difference whatever the amount comes here that will be called as the net working capital. But if you have the total of the current assets means the gross working capital GWC gross working capital is the total current assets. This is the asset side of the balance sheet. You have this balance sheet with you. You have here the total current assets and this when you are totaling up the different current assets you are saying that this is your gross working capital.

But when this, here you have the current liabilities and from this side when you are subtracting, this minus this then this work out as the net working capital. This is the concept of the current assets and the current liabilities. So ultimately we are talking about the net working capital. Now, when you talk about the net working capital, what is this net working capital? Net working capital is that part of the current assets which are financed from long term sources.

Net working capital, because under the current liabilities you have included both; spontaneous sources of finance and the short term sources of the finance. Once you have utilized fully the short term and the long term sorry short term and the spontaneous sources of finance so it means current assets we require 100 Rs of the current assets right and we have the total that is spontaneous finance as well as the short term finance we have available with us is 80 Rs.

So it means now the net working capital will be 20 Rs. And this 20 Rs will come from where? This will come from long term sources of finance because after you have exhausted the spontaneous finance once you have exhausted the short term finance after that you are left with only the long term sources of the funds that is the LTF, long term sources of the funds. So it means first you go for spontaneous finance then you go for the short term finance and then you go for the long term sources of the finance.

Once these 2 sources, this plus this is fully taken this becomes the current liabilities. So current assets minus current liability is the net working capital and net working capital is that part of the current assets which will be financed from the, current assets is that part of the, net working capital is that part of the current assets which will be financed from the long term sources, not from the current liabilities.

So it means we are utilizing means step by step we are utilizing all the 3 sources of funds, spontaneous finance, short term finance, and the long term finance. But I again I caution you, minimize the use of long term funds. So it means if you want to keep the long term funds as low as possible. So it means if you have the current ratio of 2:1. So what is happening? Your current assets are say 100 and your current liabilities are 50 so it means net working capital is going to be how much?

Net working capital is going to be that is 50. It means half of your current assets are being funded from the long term sources of funds. How expensive it will be?

(Refer Slide Time: 12:47)

So it should be, for example if you keep it say if you want to say that your current asset your current ratio is 1.33:1 it means only one third of your current assets are being financed from the long term sources. So where you are talking about the 100% of current assets coming from the long term sources where only 33.3% of current assets are coming from long term sources. So it means here if you are maintaining this ratio as 1.33:1 rather than maintaining it as 2:1 so in this case it is better to have this ratio rather than having this ratio.

Because this in this ratio 2:1, 100% of your current assets are coming from long term sources which is very expensive affair and it should come from say maximum should come from spontaneous and short term finance and then remaining part should come from the long term sources of funds. There are the companies in the market whose current ratio is somewhere you can call it as 0.8:1 means they are running the show with the negative working capital.

It is not net working capital, it is negative working capital. They are running the show with the negative working capital. So it means when they are running the show with the negative working capital so they are keeping lesser current assets as compared to lesser say as compared to their current liabilities. So you can understand that their current liabilities are more than their current assets. They are running the show with a negative working capital.

How risky it is for the business. But if you are efficient in managing your business properly and effectively in that case what will happen? We will be able to minimize the cost of funds. Your financial cost will be totally under control. There are the companies for example I was giving you the example of the steel sector.

In the steel sector we have the companies like say Steel Authority of India Limited, then we have TISCO, Tata Iron and Steel Company. Then we have recently come up Jindal Steel Works which was earlier JVSL, Jindal Vijayanagar Steel Plant but now it has become the Jindal Steel Works. Then we have Essar Steel. We have Lloyd Steel. Different steel companies are there. So other than SAIL if you I will show you in the later part of discussion other than SAIL almost all these companies are running the show with a negative working capital.

They are keeping lesser amount of current assets as compared to current liabilities. So it means they are not borrowing any capital from the bank, short term funds from the bank. Nor they having any investment from the long term sources to fulfill their short term requirements and ultimately whatever the sources of the funds available from the spontaneous finance and from the short term finance that is more than enough to fulfill their current assets funding requirement.

But this is not possible for every company. So normally means in the larger chunk of the companies you will find there is a positive net working capital where the current assets are more than the current liabilities but if you are in a position to manage the show with a negative working capital by keeping lesser current assets as compared to current liabilities that would be the best situation but there are so many other problems because of that.

So I will discuss about these problems with you later on and if you are able to manage or to take care of those problems then we are efficiently managing our working capital by running the show with the negative working capital but we will go to that part in the next part of discussion rather than here but I told you that the net working capital is the one concept that is the say here that is current assets minus current liability is the net working capital and it is written that NWC that portion of current assets which is financed with the long term funds.

So you keep this investment as low as possible, minimum, as minimum as possible so that our cost of funds or the financial cost remains under control. So task of financial manager in managing working capital efficiently is to ensure sufficient liquidity in the operations of the enterprise. This is possible to be done either by borrowing funds from spontaneous finance, short term finance, long term finance.

Choice is of the business or its finance managers how he wants to run the show. If he is borrowing more from the long term sources increasing the cost otherwise the cost is under control. Now we talk about certain things. Here we talk about something that is the objectives of working capital. Why we need the working capital? Management. Why we want to manage the working capital? What are the different objectives of managing the working capital?

(Refer Slide Time: 17:26)

Objectives of WCM

The major objective of WCM is to manage the firm's current assets and liabilities in such a way that a satisfactory level of working capital is maintained. Which means;

- Optimum investment in current assts
- Adequate liquidity
- Marginal ROI in Current Assets should be more than cost of funds
- Maximization of firm's value

It is written here, the major objective of working capital management is to manage the firm's current assets and current liabilities in such a manner or in such a way that satisfactory level of working capital is maintained. Optimum level of the working capital is maintained which means optimum investment in the current assets. I am using the word neither less nor more, optimum investment in the current assets. So how much you require?

You maintain that much level of inventory, that much level of credit sales, that much level of cash, that much level of marketable securities not more; adequate liquidity. Because we are

raising the funds from different sources like current liabilities, spontaneous finance, short term finance. Spontaneous finance becomes due to be paid after say when the credit period allowed by the supplier ends.

So when the supplier's credit period is coming to an end, you have to make the payment. If you are not making the payment on the due date you are not considered as the efficient manager. And that supplier, relationship with the supplier will sour and that supplier may also start feeling that this firm is not a good pay master. They are not making our payment on the due date. So it will spoil the reputation of the firm.

And when you can make the payments on the say at the time when they become due, when we have the adequate liquidity where adequate liquidity means sufficient amount of the cash. But it should not be excess liquidity. Keeping excess liquidity is expensive. Keeping lesser than the required amount of liquidity is again expensive negatively. Because then the firm would be would not be able to make the payment on the due date and that would be considered as technically insolvent.

Any firm which is not able to honor its obligation on the due date is considered as technically insolvent firm. So we have to have optimum level of current assets. We have to have adequate liquidity and at the same time marginal return on investment in current assets should be more than the cost of funds. Now how to do it? It is only possible, marginal ROI in current assets should be more than the cost of funds.

So only in case of your spontaneous finance and short term finance you can keep ROI more than because you can pass on that cost to the buyer or if you are keeping inventory that inventory cost can be added to the total cost of the product but to a certain extent. If it is the borrowing is from the long term sources and 20% if you would like to add as the inventory cost or maybe as a cost of credit sales nobody will be buying the product of the firm maybe on the credit because the cost is very high and price is because of the cost is very high.

So we would not be able to sell it even on credit. So we have to keep the cost under control and last objective is maximization of the firm's value. Ultimately, maximization of the firm's value that if you are managing your upper part of the balance sheet properly your long term assets and liabilities. If you are managing the lower part of the balance sheet efficiently the current assets and current liabilities then only the firm's value will be maximized because the profits will be maximized and overall the return on investment will be maximized and the value of the firm will be maximized.

Now we have some other concepts relating to the working capital say we talk here about working capital management or maybe the over capitalization of the working capital, under capitalization of the working capital, or the zero working capital and fourth one is the negative working capital.

(Refer Slide Time: 21:22)

Some other important concepts

- WCM (Over Capitalisation)
- WCM (Under Capitalisation)
- Zero Working Capital

Short-term Vs. Long Term Financing: A risk-return trade-off

- Cost
- Flexibility
- Risk
- Risk-Return Trade-off

Liquidity Vs. Profitability: Risk-return trade-off

Cost trade-off

I just talked to you about the negative working capital. When you keep the current assets lesser than the current liabilities and the current ratio is 0.8:1 it means your current assets are just 80% of your 100% current liability. That is a negative working capital. Similarly, over capitalization. When you are keeping the current ratio as say when you talk about the current ratio in the you are keeping your current ratio that is the very high current ratio.

And if you are keeping the current ratio very high it means if the current ratio is 2:1 in that case what is happening. Your cost of the funds will be increasing and if the cost of funds increase then what will happen? Your say 2:1 current ratio is 2:1.

(Refer Slide Time: 22:09)

Current ratio is 4:1. Current ratio is 3:1. It means you are keeping 2 times of the current assets as compared to current liabilities. You are keeping 4 times of the current assets compared to current liabilities. You are keeping 3 times of current assets as compared to current liabilities but it will amount to increased financial cost, increased financial cost and that is not in the interest of the firm because every cost has contribution to the total cost.

Production cost, raw material cost, product manufacturing cost, then your human resource cost, then your selling and distribution cost. Similarly, you have the financial cost. So you have to keep the financial cost as low as possible. So if you are keeping your working capital at a very high level, 2:1 or 4:1 or 3:1 is the current ratio you are maintaining, so you are over capitalized. Under capitalized for example when you talk about the under capitalization.

Under capitalization means that when we are keeping the level of current assets that is very low. Say for example you need to have inventory of certain level. We say that you have the need the inventory, all the times you need the inventory of 100 Rs, you should be selling 20% of your

production on the credit. You should be having say cash with you all the times 100 Rs then you can need to make the 50 Rs as advance payments.

This is your optimum level of maintaining the current assets right. But for example you are keeping the inventory of say 70 Rs. Then you are selling on the credit say for 5 Rs. Then you are say keeping the cash of say again 70 Rs and then similarly you talk about your advance payments you are only able to make the advance payments to the extent of 30 Rs.

So it means against this much level of desired level of current assets if you are keeping this much level of current assets you are under performing. Your working capital it is not a negative working capital I would say. It is the positive working capital but it is under capitalized. Optimally capitalized is this level and if you are keeping this level it is the over capitalized. But if you are as I told you if you are keeping the level of current assets is 200.

Similarly if you are selling the for the credit is for 40 Rs. If you are say keeping the cash of 200 Rs and if you are making the advance payments of 100 Rs it means you are keeping this much level of current assets against this much level of current assets. So this is the optimum level of current assets. This is the under less than the optimum level of current assets and this is the say the firm is over capitalized.

Then the current assets are too much as compared to the optimum level. So it means in this situation this is not good. This is not desirable situation for the firm. So what you have to do is that you have to maintain the optimum level of current assets all the times. As we have seen in case of the objectives of the working capital that the important objective of the working capital management is that we have to keep the optimum level of current assets.

And if you are maintaining the optimum level of current assets in that case we are optimally working capitalized and if you are keeping the optimum working capital it means everything is under control and we are say progressing optimally. Now short term versus long term financing are risk-return trade-off. I have been talking to you in this lecture as well as in the previous lectures also that we have to keep the cost of funds in mind.

So to manage the cost of funds we borrow from the spontaneous sources then short term sources and then from the long term sources. But both the sources have pros and cons. If you are borrowing from the spontaneous finance it is a self-adjusting self-liquidating source of finance and he is giving you the credit only for a few days or maximum for a few months. Some supplier may agree, I told you that credit period in India is 45-60 days.

If the firm is very efficient having a good reputation in the market they may be able to have the credit period for a period of 30 days, 60 days sorry. But if they are not that much credit worthy, nobody would like to give them even a credit for 30 days. Or if you are in between you can have the credit for 45 days but maximum after 2 months you have to make the payment to the supplier. So we have to keep the certain amount of cash ready all the times.

And if you are not able to make the payment to supplier on the due date, it will spoil the reputation of the firm. So it is said in the financial literature or in the business practices that if any payment is due to be made to anybody say on 5th of December morning it is better to make the payment on or in the evening of the 4th of December rather than delaying it to the evening of the 5th of December. Means the payment was due to be made on the in the morning.

The cheque should have been dispatched or the cheque should have been reaching in the supplier's office in the morning of the 5th of December. But you said that we will send the cheque in the evening. They will not okay what makes the difference? We have to make the payment on 5th of December. So it means is it does not make the difference whether we make the payment in the morning, or in the evening, or maybe today or maybe tomorrow, does not make the difference. But that makes the difference.

If any payment is due to be made and if the supplier is waiting that at 10 o'clock I will be receiving the cheque from my buyer or to whom I have supplied on credit, he will be sending me the cheque for say 1 million rupees, 10 lakh rupees and if you delay it just without any reason that okay there is no difference sending the cheque in the morning or making the payment in the evening, that makes the difference. You should be very careful.

So it is the to be financially disciplined organization it is better to send the payment in the evening of the 4th of December rather than delaying it from the morning till the evening of the 5th of December. That much of the delay is also not expected, is not warranted, is not desirable in the business operations. So means under the spontaneous finance though it is the cheapest source of finance, lesser costly, least costly source of finance but it is you have to be very careful while maintaining the liquidity and making the payment to the source.

So it means what is the positive, that the cost of the funds is least under the spontaneous finance but the negative part is that you have to maintain the proper liquidity and if you default in making the payment it will spoil the reputation of the firm. Now go to the short term source of finance. In the short term source of finance we borrow the money from the banks or financial institutions for a period of say minimum 6 months.

Or short term source of finance means the funds are provided by the source or by the financial institutions including banks for a period of 1 year. So if you borrow money from the bank for a period of 1 year or maybe for 6 months, at least for 6 months you are relaxed. You can use those funds for 6 months and after 6 months you have to return the short term loan so it means that much of hurry is not there as it is there in case of the spontaneous finance.

And in case of the long term source we have borrowed the money for 5-10 years so it means regularly we have to pay the interest and we have to send the installment of the long term finance maybe 6 monthly or maybe say quarterly. So that only installment is going. You are not to pay the 100% loan back to the source so that luxury is there. But the negative part is cost of the long term funds is very high.

So it means both the sides are there. Both the sides of the coin are there that pros and cons go with the sources of the funds. So if sometime cost is lesser then we have to be careful we have to maintain the proper liquidity and make the payment on time. If the cost is high so some means we can be relaxed for some period of time that okay that is not going to be paid now, it is not becoming due now, we have to make the payment after some period of time.

So we will make it and we will make the arrangement of the funds. So it means ultimately both the sides both the extremes are not good. Both the extremes are not good. So what we have to do is we have to have a trade-off. You have to take the some positives of the one source and you have to say deal with some negatives of that source. It has to be a trade-off. You cannot afford to have total working capital finance from long term sources.

You cannot have or you could not afford to have total working capital finance from the short term sources or from the spontaneous sources. So it means you have to have the mix of the sources. Partly it is coming from spontaneous, partly it is coming from short term, partly it is coming from the long term. So ultimately, we will have to have a trade-off because if you are minimizing the cost you are maximizing the risk and if you are minimizing say maximizing the cost you are minimizing the risk and both the extremes are not good.

So why not to have the path in between, that which is good for the firm also, we can maintain it also, we can manage it also and we can keep the cost under control. We can keep the liquidity all the times available with us so that technical solvency is also maintained, financial cost is also under control and ultimately the desired amount of the profit is also earned and that is also expected to be earned.

So when you talk about the trade-off between the profitability and risk so it means here we have to deal it from the 2 angles. Say for example if you are funding large say chunk of your current assets from the long term sources I told you just that the net working capital means that is the difference between the current asset to current liabilities. That difference between the current asset and current liabilities will be something like that.

(Refer Slide Time: 32:37)

If you say if you are borrowing money and if you are maintaining the current ratio of 2:1 and other side you are maintaining the current ratio of 0.8:1. Choice is yours what you want to do. If you have this so what will be your net working capital? That will be 1; 2-1 is the 1. Here it is your negative capital is - 0.2. In this case, risk is very high. In this case, the risk is very low because you have double of your current assets to pay the current liabilities.

So if you first you will utilize the cash. Then you utilize the marketable securities. Then you will go for collecting your credit sale bills and if all these things are fully exhausted then the turn of the inventory will come which is I think the farthest most. That need does not arise. You are most comfortable because you have kept two times of the current asset as compared to the current liabilities.

But in this second case you have kept as only your current assets are just 80% of your current liability. So how careful you have to be. And if you are managing the financial cost in one, you are maximizing the risk and in the second case if you are minimizing the financial cost you are maximizing the financial cost, your risk is low. So in this case so what is happening that the 2 parts of the working capital story is higher the net working capital lesser the risk but the profitability is low.

(Refer Slide Time: 33:58)

Trade-Off between Profitability and Risk

- In evaluating firms NWC position an important consideration is trade-off between profitability and risk
- Higher NWC => Less Risk => Low profitability
- Low NWC => Higher risk => Higher profitability

And second case is low net working capital higher the risk but the profitability is higher. So in these 2 approaches we have the 2 extremes.

(Refer Slide Time: 34:12)

Trade-Off between Profitability and Risk

- Risk is defined as the probability that a firm will become technically insolvent and won't be able to meet its obligations as and when they become due for payment. It is measured with the help of magnitude of NWC.

And once you have the 2 extremes so it means extremes are always bad especially in the business extremes are always unmanageable. They are bad. So why not to have a trade-off. You pick up some good parts of the one, something good and you took the take the say some good part of some other something else and then you mix up the good parts and finally you will be having a middle path. That is called as a trade-off.

It means not to resort to the extremes but to have the middle path and then to picking up the best of the two things then we will try to create a theory or use the theory or approach a working capital so that we can keep the risk also under control. We can keep the profit also at the acceptable level and finally the overall profitability of the firm is not affected negatively, rather it is affected positively. So what is the trade-off, how to have it, and what is the benefit of this trade-off I will discuss with you in the next class. Thank you very much.