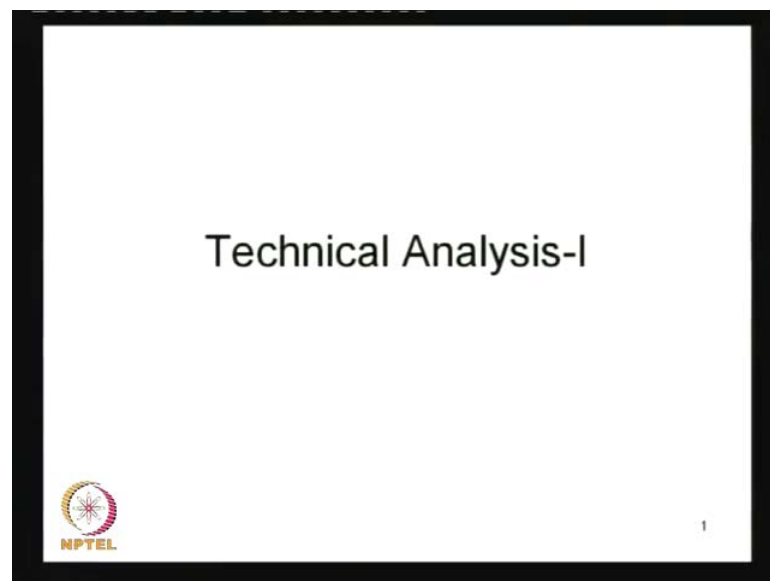


Security Analysis and Portfolio Management
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Module No. # 01
Lecture No. # 19
Technical Analysis – I.

Good morning, today we will be discussing about the theme of the security analysis, which generally always the brokerage firms or the individual investors use for the maximization of their return in the market.

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Or in general, we can say that the concept of security analysis is always discussed in the area of investment management, which talks about the analysis of the various securities. And the analysis basically consists **consists** of how generally, we take the decision for investment in a particular asset.

So, after discussing about the different markets, where we do the investment, then also we talked about the risk return aspects, then finally, also we talked about **the** some of the issues related to efficiency of the capital market. So, then, now today, we will discuss

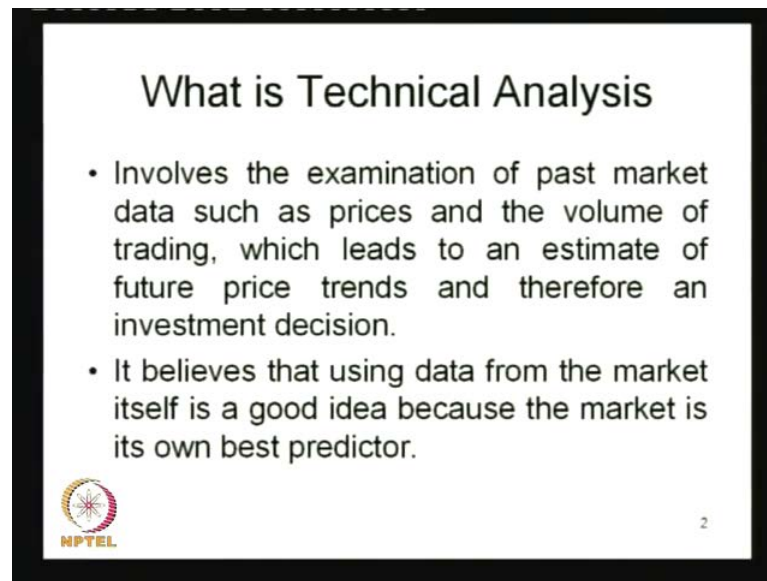
about the **the** concept of technical analysis, which is one of the oldest approach people use in the market to analyze the individual stock. So, here, whenever we talk about the security analysis, the security analysis can be done through two ways, already in the previous sessions we discussed little bit about the different market efficiency concepts. And all those technical analysis **and**, as well as the concept of fundamental analysis is very much linked with the concept of market efficiency.

So, whenever we talk about the fundamental analysis in the beginning or as well as **also** in the later phase, we have discussed the issues related to the concept of market and the concept of the top down approach or the bottom of approach. But here, whenever we talk about the technical analysis, we basically use this different techniques or different tools to analyze the individual stock or individual securities to take our decision in the market. And the decision already I told, that is decision, means we generally refer to decision for the investments.

And in this context, whenever we refer to the concept of investment decisions, there are two types of things is involved in this particular issue, one is related to the buying of this particular asset and another one is the selling of the securities in a particular time. So, basically the technical analysis will answer you, when you should buy the stock and when you should sell the stock. So, here, today we will discuss, I will be discussing about the different concepts and different theoretical issues and as well as the **the** theoretical mechanism about the technical analysis.


But then, later phase, we will be discussing about the different tools and the parameters of the techniques what we use to always analyze the stocks in the market through this technical analysis part.

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What is Technical Analysis

- Involves the examination of past market data such as prices and the volume of trading, which leads to an estimate of future price trends and therefore an investment decision.
- It believes that using data from the market itself is a good idea because the market is its own best predictor.

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So, coming back to our analysis or coming back to the theme, what exactly the technical analysis is, already I **I** have told little bit about what basically the technical analysis is, but here basically the technical analysis is nothing but it is the examination of past market data such as prices and the volume of trading, which leads to an estimate of future price trends and therefore, on investment decision it believes that using data from the market itself is a good idea, because the market is its own best predictor.

What it exactly means? If you refer through our previous discussion about the efficiency of the market, what we have said there, that if you say that your market is a weekly efficient, then we cannot predict the future price of or the future return from a particular stock by analyzing the past prices of that particular stock.

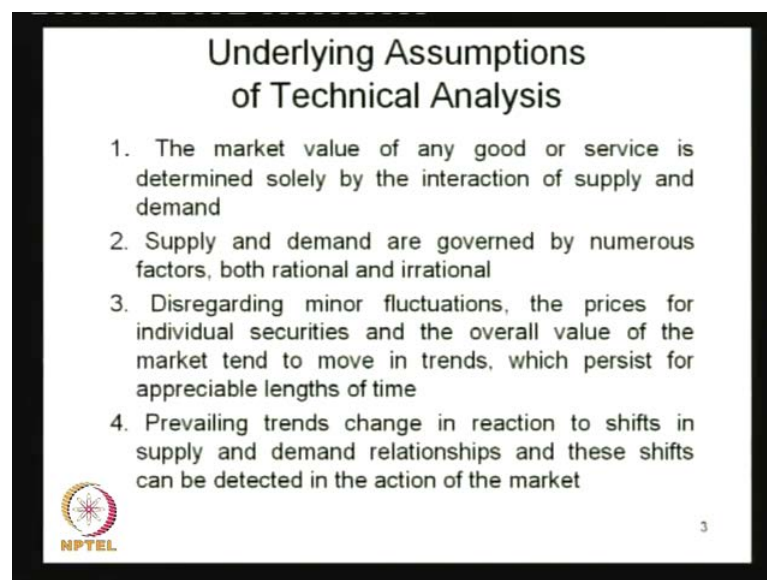
But, here, whenever we analyze this technical analysis or we discuss about the technical analysis, what basically always we observe is that the technical analysts believe that the stock price itself is reflecting everything about a particular stock. It involves all the news, all those issues and all those pros and cons advantages, disadvantages about that stock.

And therefore, if you analyze this past trend of this particular stock and if you see that how this stock was performing in the previous years, then we can say that what is going to **be** happen in the future, that means how this stock is going to perform in the future.

So, therefore, we can see in the beginning that the technical analyst does not believe in the concept of the weak form of market efficiency. Here, what generally they believe that by analyzing the past prices of a particular stock, we can say about the future of the stock, that means how this stock is going to perform in the future that can be exhaust if you analyze the past returns or past prices of that particular stock.


So, therefore, once we are sure about that how this particular stock is going to perform by analyzing the past data, it helps to take a very unique investment decision in the financial market. So, therefore, always we say that, the technical analyst believe that market is not weakly efficient if you refer the concept of market efficiency, what we discussed in the previous class.

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**Underlying Assumptions
of Technical Analysis**

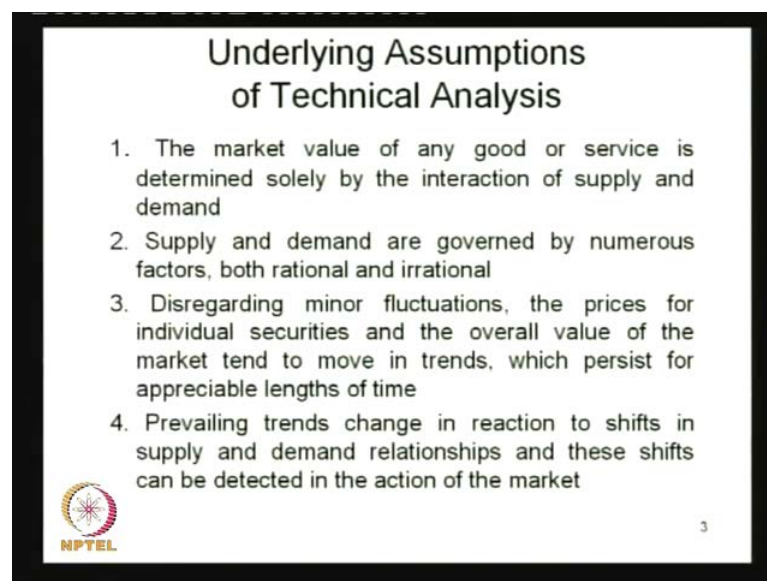
1. The market value of any good or service is determined solely by the interaction of supply and demand
2. Supply and demand are governed by numerous factors, both rational and irrational
3. Disregarding minor fluctuations, the prices for individual securities and the overall value of the market tend to move in trends, which persist for appreciable lengths of time
4. Prevailing trends change in reaction to shifts in supply and demand relationships and these shifts can be detected in the action of the market

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So, then, there are certain assumptions are involved in this, whenever we talk about this technical analysis, the assumptions are like this, the market value of any good or service is determined surely by interaction of supply and demand. That means, there should not be any kind of external shock, which can decide the demand and supply of that particular asset, it is basically the supply of that particular stock by the investor in the market and the demand for that particular stock by the people who wanted to buy that particular stock.

So, that is why surely whole process is **a** determined by a market mechanism and all those concept which talks about the market mechanism, it is basically determined by the demand and supply situation of that particular security or the particular asset. So, therefore, what we can see here that surely the prices of that stock is determined by the market forces. So, there are certain factors which comes under the supply side and there are certain factors which comes under the demand side and only those factors are responsible for the determination of the stock price in that particular market.

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And already what I told you that supply and demand is governed by numerous factors, both rational and irrational. Then a third point is disregarding minor fluctuations, the prices for individual securities and the overall value of the market trend, a market tend to move in trends which persist for appreciable lengths of time.

Prevailing trends change in the reaction to shifts in supply and demand relationships and these shifts can be detected in the action of the market. You just observe minutely those assumptions, which is very critical and as well as very important in the concept of an investment management.

Why we talk about, it is very important or very dynamic or we can say very complex in the context of investment management, there are very huge assumptions and **very**, we

can say strong assumptions have been taken by the people who believe in the technical analysis.

First point you see, already I have told you there are certain factors which affect the demand for the stocks and certain factors we supply the, which happen the supply for the stocks, but here if you see that we have used this word rational factors and the irrational factors, how do define the rational factors and the irrational factors.

There are certain factors, which is known, there are certain factors, which is already existing in the market and there are certain factors, which already we know that **this** these factors have the impact for determination of the stock prices in a particular normal situation, but there are some irrational factors.

For example, you say that the market changes because of the rational behavior of the investors may be you can say the sentiment of the investor which plays the significant role. So, basically whenever we observe there are certain factors which are not systematic, which are not regular, but still those factors play the significant role for the determination of the stock prices in a particular financial market.


So, here what we can see is that always the technical analyst should analyze those rational and irrational factors, and what could be those probable rational and irrational factors in a particular market situation.

So, it is very important to get all those factors, which could have the impact of the stock prices. If you can know those things, then maybe it will be easy to analyze the trends in that particular security and finally, **we can (())** or we can conclude something about the determination of the stock prices in that particular market.

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Underlying Assumptions of Technical Analysis

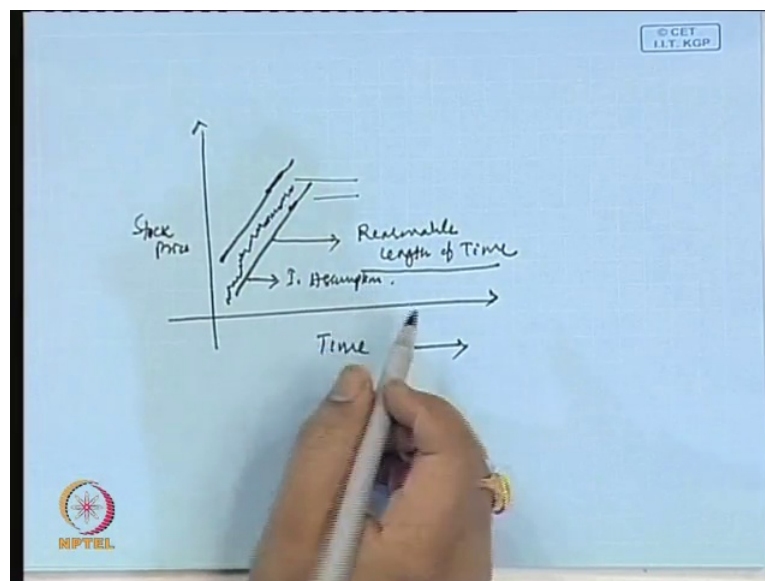
1. The market value of any good or service is determined solely by the interaction of supply and demand
2. Supply and demand are governed by numerous factors, both rational and irrational
3. Disregarding minor fluctuations, the prices for individual securities and the overall value of the market tend to move in trends, which persist for appreciable lengths of time
4. Prevailing trends change in reaction to shifts in supply and demand relationships and these shifts can be detected in the action of the market

3

So, finally, what you see that this regarding minor fluctuations, may be this is because of so and so adjustment cost, which is happening in the market every day, the prices for individual securities and the overall value of the market tend to move in trends, which persist for appreciable lengths of time, which is very important in this (()).

What basically it means? What the technical analysts believe, that apart from the very minor fluctuations, which comes from various sources, because of the various adjustment on the flow interest and cost, if there is certain trend, one particular security is following for a certain period of time, then that trend or that behavior should persist for the reasonable period of time or reasonable length of time.

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That means what we can say, that if we are observing a certain trend, if you say that this is your time and this is your stock price, so here what they have said, that if you analyzing this data if you are saying that these are the fluctuations or these are the trends which the particular stock is following, so these trend, increasing trend, what we are observing for this particular stock, that is will persist for a reasonable length of time.


That means, what we can say here that immediately for a certain period of time if we observe this particular trend, that particular trend is not going to be changed immediately, that means it persist, the concept of inertia may work here. That means, immediately the trend is not going to down, the trend may not be flatten, so that means, what here we can say that basically the trend will be persisting over a period of time.

So, if you believe this concept of the persistence in this case or we believe **this** that this concept of inertia, the theory of inertia, which can persist, which can prevail here, then basically what we can say, in that particular time period this individual stock obviously will go on increasing after certain time. So, immediately that impact will not be vanished, the impact will not be absent in that particular scenario, so this is a very important assumption what generally this technical analyst have taken.

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Underlying Assumptions of Technical Analysis

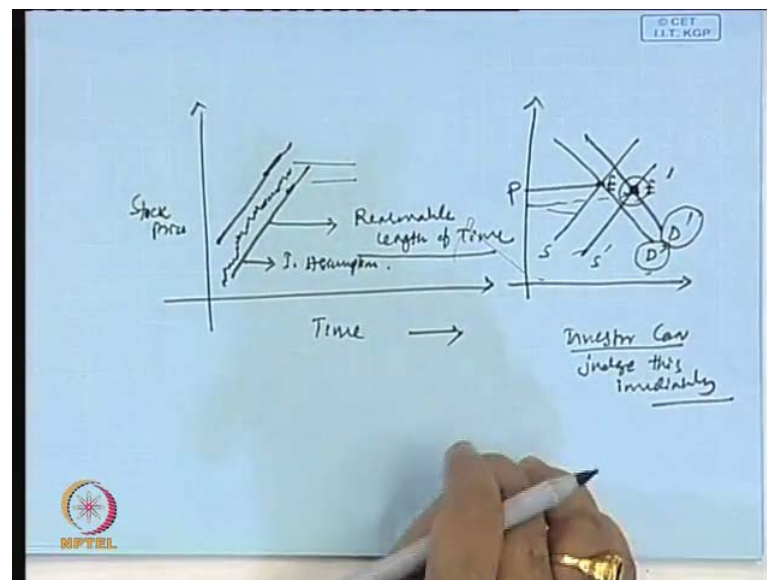
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3

Another assumption what they have taken if you have observed that, they have taken that prevailing trends change in the reaction to shifts in supply and demand relationships and this shifts can be detected in the action of the market.

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You just observe here, let us have a demand supply situation, and here let us in a particular time the price of the stock is determined and this is your equilibrium point. And if you observe here that, what we can say that, for certain things if there is a these equilibrium or there is a shift of the demand curve or the supply curve, then may be the new

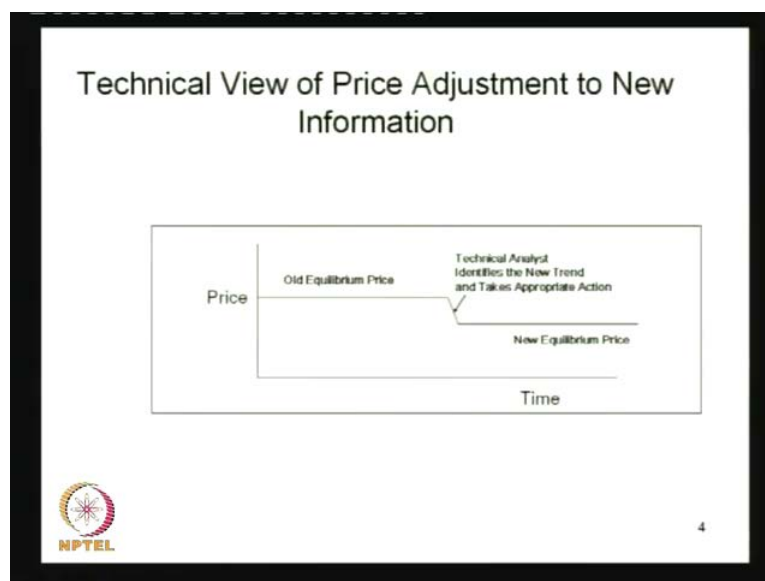
equilibrium will be established somewhere else and that time may be, the price will be changed.

But here, what generally the technical analyst assumes, the technical analyst assumes that the price, **this particular** whenever we talk about the, let us say, let this be your demand curve and this be your supply curve, here what we have seen that, here what we can say that, because of so many rational and irrational factors, if there is a change in the situation of the supply curve and demand curve, then your equilibrium point will be shifted and a new price will be established.

But what basically here we assume, that once this demand and supply of the situation of the particular stock or the factors which are responsible for the demand situation and the factors which are responsible for the supply situation, if they will be changed, obviously in that particular time, according to the technical analyst, this investor can judge these things immediately or the situation of the investor or the position of the investor in the market will be changed immediately after this change in the demand and supply situation in that particular time.

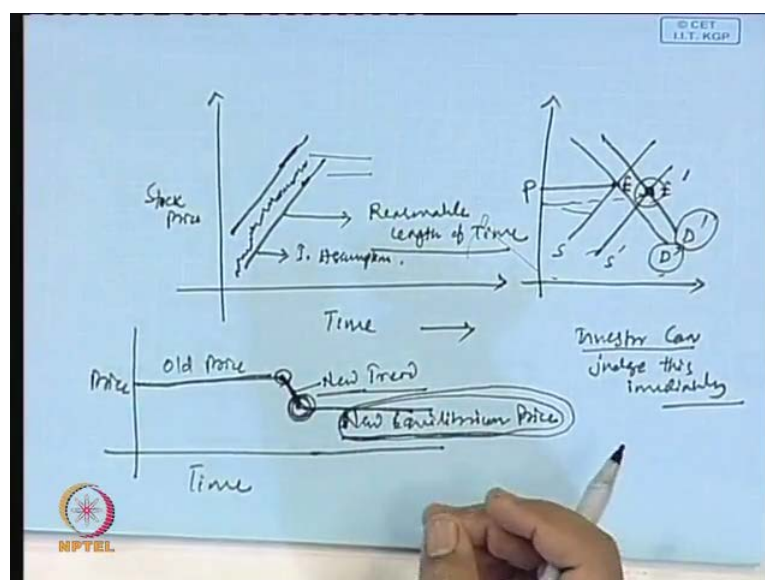
And that means, if immediately the investor can detect that change or immediately the investor can say that now the demand and supply factor is going to be changed or the demand for the stock or the supply of the stock, which is going to be changed, then he can change the action. That means, we can say that the market is so efficient in that way, **that** immediately that information will be available to the investor and the investor can adjust his position in a market in such a way that he is not going to be the loser in the market. So, that is why it is a very important assumption what they have taken, the technical analyst have taken.

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So, this is the situation what generally will arrive, just know I have shown that, **that** what basically here it happens, let already what I have saying that this is your time and this is your price. And if you talk about **the** this is your time and price, this is time and this is your price, then for example the price was following this kind of trend.

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And all of sudden because of the demand supply situation and the change in the demand and supply of the particular stock, the price as gone down, but once the price as gone down, immediately what has happened? For example, this has gone down like this, what

is shown already in this graph. What basically here in this point, we assume the technical analyst identifies the new trend, that new trend in the sense, now it was going like this, now the trend is going like this. So, this new trend can be immediately observed by the technical analyst.

And once this new trend can be observed, then obviously in that particular situation what the technical analyst do, the technical analyst change their position in such a way that already they can arrive this **the** new equilibrium price, that means there is no time lag to know that one new equilibrium price is going to be formed.

Basically this is your old price, because of the demand supply situation, **demand for the** demand for the stock and supply of the stock and because of the changes in the factors which happened the demand supply situation and the supply situation. Once the new equilibrium price will be determined, in that particular situation what happens that the technical analyst can adjust or **or** we can say immediately detect that particular trend and once they can detect this particular trend, then they will be helpful, they can decide that how this new equilibrium price can be determined in the market.

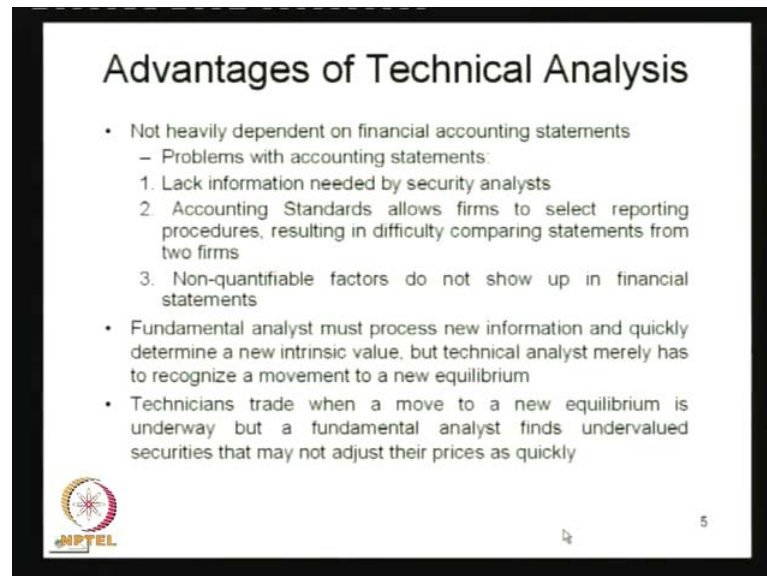
So, this is basically the technical view of price adjustment with the new information and this new information in the sense what we mean that, because of this new information **the** and the new information source is basically the demand supply situation of that particular stock.

If the demand for the stock or the supply of the stock changes because of the certain factors, which are responsible for the demand of the stock and the supply of the stocks and that news or the information immediately can be detected by the technical analyst. And once the technical analyst can detect that particular new information, then he can adjust this price in such a way, he can arrive in the new equilibrium position very short period of time. So, that should not be any kind of time lag and within that time lag some kind of adverse situation can prevail in the market or the investor can lose in the market.

So, therefore, what we can say that the technical analyst is so efficient and the technical analyst is so smart to judge this information and once he judge this information, they can detect this new equilibrium price and obviously, immediately the next step will be they

can arrive this new equilibrium price immediately without any kind of time lag, so this is your technical analyst view about the information in the market.

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So, here if you observe, there are certain advantages, which are related to the technical analysis, which **is** already we talked about the concept of technical analysis, it is basically nothing but that whenever we use the different variables related to the stocks like the **trade** trading volumes or **the** like prices and by analyzing the past trends or past analysis of this prices and about trading volume, we can say that how this particular stock is going to behave in the future.

So, the advantages of the technical analysis is basically it is not heavily dependent on financial accounting statements, it is a very **means we can say very** interesting kind of advantages what we can say.

Why it is very interesting because, there are certain problems always we face whenever we talk about the different accounting statements, may be there are lack of information needed by the security analyst, accounting standards allow firms to select reporting procedures resulting in the difficulty comparing statements from the two firms. Non quantifiable factors do not show off in the financial statements, very interesting, come back to the discussion of the accounting statements. There are certain factors which cannot be reflected by the accounting statements, already I thing in the beginning of

session or beginning of this particular course, I also talked about that thing, there are certain factors, for example, the intangible factors, the managerial ability, the opinion about the company or the brand name of the company or **the** we can say the perception of the people about the company. These are also the significant factors, which can play the determination of the stock return of that particular company.

But that cannot be reflected in accounting statement, may be that is reflected in the stock price, but it is very difficult to accommodate those things in the accounting statement of that particular company. So, if you analyze this accounting statement of the particular company or the balance sheet of the particular company, we may not analyze clearly about the actual performance of the particular company in that particular time or we cannot say that if the accounting statement looks like this, may be the particular company is going perform like this in the future.

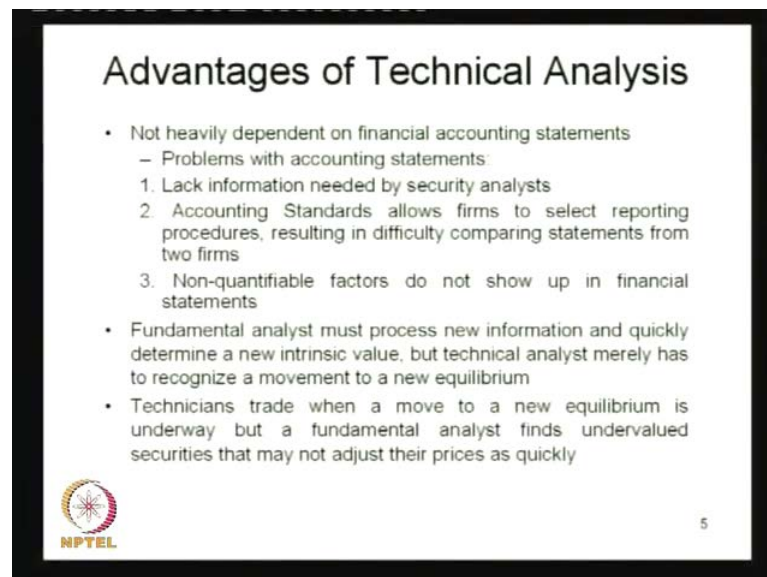
Therefore, there are certain limitations which are involved in the accounting statements of the particular company and then what is the other thing? Other thing is already said that from company to company, from period to period, from country to country this accounting standard changes. If the accounting standard **standard** changes, in the sense what I refer that in the reporting system, how this particular statement should be reported, that particular format also changes. So, if those rules, regulation, formatting, all those things will be varied from place to place or period to period, then what will happen that comparison of those analysis for a certain period time and by analyzing this particular trend, if you can predict or forecast something about the future, which is quite difficult by analyzing the accounting statement.

The another thing is, whenever we talk about the factors like subjective factors, already I told the psychological factor, the investor sentiment and etcetera, that cannot be also reflected in the accounting statement, but that has lot of implication for the determination of the stock prices. So, here what I say, what we can say that whenever we use accounting statements to analyze about the company or to predict about the company for the future, may be it leads to certain problems because of lack of information or may be the limitation because of the limitations of this accounting statement whatever we have.

But here, what we do, in the technical analysis we do not do anything, we only use the stock return data or the stock price data or the trading volume data and we analyze the


stock price data or the trading volume data and accordingly we can say that how this particular stock is going to perform in the future. So, therefore, what in this context we can say that may be it has the advantage over the particular analysis, what we do by using the accounting standards of or accounting statements of the particular company.

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Advantages of Technical Analysis

- Not heavily dependent on financial accounting statements
 - Problems with accounting statements:
 1. Lack information needed by security analysts
 2. Accounting Standards allows firms to select reporting procedures, resulting in difficulty comparing statements from two firms
 3. Non-quantifiable factors do not show up in financial statements
- Fundamental analyst must process new information and quickly determine a new intrinsic value, but technical analyst merely has to recognize a movement to a new equilibrium
- Technicians trade when a move to a new equilibrium is underway but a fundamental analyst finds undervalued securities that may not adjust their prices as quickly

 5

Another advantage also whatever we have, that the fundamental analyst must process new information and quickly determine a new intrinsic value, but technical analyst merely has to recognize a movement to a new equilibrium. What here we see that, whenever we talk about the fundamental analysis, what basically already I told you that the fundamental analysis consist of so many steps, first we do this economic analysis, then industry analysis, then company analysis, etcetera.

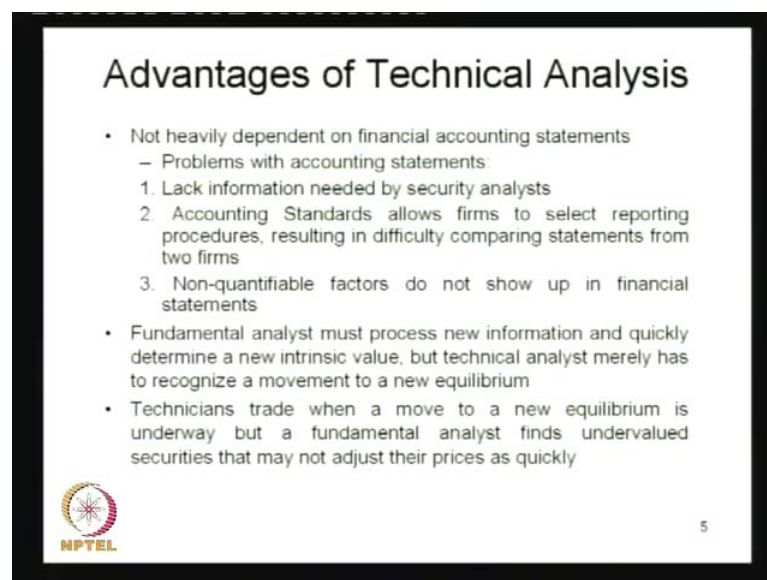
And by doing those kind of analysis we generally determine this intrinsic value of this particular stock and first of all it is very cumbersome matter to analyze everything and after analyzing everything we may not say that always that kind of situation will be prevailed for a period of time. For example, the macro economy situation may change, may be the demand for the industry will be changed or we can say the company profile may be changed because of so and so factors.

So, that time what we can say, it is quite difficult, quite cumbersome, if you do one by one fundamental analysis for all the companies before taking the investment decision in

the market, but those kind of analysis you do not have to do if you rely on the technical analysis. Only you have to use those stock price data or you have to use the trading volume data to conclude whether you should invest in that particular stock or we should not invest in that particular stock.


Whether we should invest or not invest that is basically determined by the fluctuation in the prices of the trading volume. So, you should not bother about the other parameters which are involved in this particular process, it is because already we have assumed all those parameters impact is already reflected in the stock price itself. So, individually we do not have to analyze those things again and again to know whether we should invest in this particular company or not.

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Advantages of Technical Analysis

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 - Problems with accounting statements
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So, that is **why** what generally we can say that the technicians trade when he move to equilibrium is underway, but a fundamental analyst finds undervalued securities that may not adjust their prices as quickly. Here, what we do? Technical analysis whenever we use or the technical analyst can get this information so quickly, that is why the price is adjusted immediately and we can arrive in a new equilibrium position.

But, whenever we talk about the fundamental analyst, what generally they do, they calculate this intrinsic value of the stock. And once they **are** calculated the intrinsic value of the stock, I hope you know from the equity valuation what basically the intrinsic value

of the stock, that is basically we can calculate using this cash flow and as well as the discount rate.

So, once we have the intrinsic value of the stock and we have the actual value what is there existing in the market about that stock, we call it the market price. Then by comparing between the two, they can say which particular stock is undervalued or which stock is overvalued. And once you have identified the undervaluation and the overvaluation, accordingly you can take your decision in the market, whether you should buy the stock or you should sell the stock or whether you want to really invest in that particular stock or not.

But, in this context, whenever we talk about the technical analysis, we do not have to do that, we do not have to calculate this intrinsic value of the stock or you do not want to know which value, which particular stock value is undervalued and which is overvalued. So, without analyzing the undervaluation and overvaluation concept, so here what generally we do always we use this concept of price trend, how this price is basically changing, if the price is changing in a certain direction and this particular change in price follows a certain trend, then we can say we should buy the stock, it follows a certain trend, we can go for the selling the stock.

Whether we can buy or sell, that basically the price trend or the trading volume will answer you or will say you we do not have to see that whether the particular stock is overvalued or the particular stock is undervalued. So, this is basically what we can say the concept of or we can say the advantages of technical analysis over the fundamental analysis. And with this certain advantages, we have certain disadvantages also.

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Challenges to Technical Analysis

- Assumptions of Technical Analysis
 - Empirical tests of Efficient Market Hypothesis (EMH) show that prices do not move in trends
- Technical Trading rules
 - The past may not be repeated
 - Patterns may become self-fulfilling prophecies
 - A successful rule will gain followers and become less successful
 - Rules require a great deal of subjective judgement

 6

Which are those disadvantages or we can say the challenges, which are those challenges? The challenges are like this, the challenges are basically the assumptions of technical analysis. There are lot of unrealistic or we can say this very we can say that the assumptions what we have taken for the technical analysis is may not be accepted by certain economist or the financial experts.

Why that particular problem arises? Because this empirical test of efficient market hypothesis show that prices do not move in trends; that means, the whenever we test this efficient market hypothesis, what here we judge, there most of the markets are weakly efficient. If you believe in this concept the markets are weakly efficient, what does it mean? That means, the analysis of the past cannot predict about the future or if you analyze the past prices of this particular security or particular stock, you cannot say what is going to happen in the future for that particular stock.

But here, the whole technical analysis, we listen that philosophy, the whole technical analysis talks about how this particular stock is going to perform in the future, that we can judge only from the analyzing the past values. So, if that is so, that means we are discarding the concept of market efficiency in that context.

If you do not believe this concept of market efficiency, then the technical analysts view can be accepted in the investment decision process, that is why in the assumption what

we have taken that the **the** price of **of** that security or the price of that particular asset or prices of that particular stock will reflect everything. And if it is **if it is** reflecting everything and to this particular stock does not follow a particular trend, then it is very difficult to use the technical analysis in the market where the market is weakly efficient.

So, therefore, what we can say here that is quite difficult. If you assume that your market is weakly efficient, it is very difficult to say that whether the technical analysts view can be accepted in the financial market or not. Then another thing is there are some trading rules, what we follow in the technical analysis they are also, there are lot of challenges behind that.

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And the challenges are like this, the past may not be repeated, patterns may become self fulfilling prophecies. A successful role will gain followers and become less successful; rules require a great deal of subjective judgment. Here, if you see, this technical trading rules, what we have observed here most of the times, the past may not be repeated because of so and so reasons, because of some micro economic factors, because of the political situations, may be because of the situations like a change in the investor's mood. So, the past may not be repeated again and again or we can say the recent crises which is really creating the problem for all kinds of stocks, it is because of, but it was not happening in the future or there **there** was more, it was not happening in the past.

So, if it is not happening in the past or we cannot predict that this is going to happen in the future and **of** you go and analyze this particular stock prices in this particular period and you are predicting something about the future, then it is quite difficult to say that how this particular stock is going to perform, then the patterns may become self fulfilling prophecies.

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Challenges to Technical Analysis

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What does it mean? The pattern what we are observing that may not be, what we can say that, we can say that, that reflects everything, that may be is a self fulfilling prophecies, where everything is reflected already there and that may not also suitable or suitable parameter or suitable information which can predict about the future.

A successful rule will gain follows and become less successful, once the particular rule or particular trend we have followed and some of the people have got the benefit out of this, then obviously, once this information reaches to the market, then everybody follows that particular principle. Then what will happen that, finally after certain period, this rule became unsuccessful, because everybody follows that, so whole demand supply situation of this particular stock changes. If whole **the** demand and supply situation of that particular stock changes, then it is very difficult to use that rule again and again, because it affects this particular price of that particular stock and it affects the whole demand supply situation of that particular stock, the market mechanism changes, the market

dynamic changes. If the market dynamic changes, it is quite difficult to again and again use the same rule, you know the trick, you have gained some thing.

But still again and again if you are using it and that information reaches to everybody, then what will happen that this particular rule may not be successful in the future. So, therefore, always it is preferable not to use the same rule again and again if you want to maximize your return in a particular time.

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 - Rules require a great deal of subjective judgement

 6

So, therefore, what we can say that, we cannot say that always this particular trading rule will be prevailed or will be applicable in a financial market. Then finally **also** what we have observed here, the rules required a great deal of subjective judgment. Whenever we are talking about a particular stock and we observe that immediately **we** this particular price adjustment is happening in the market, here **what** already we little bit **we** discussed about this, that it requires lot of subjective judgment and that subjective judgment is quite difficult to measure.

So, once we say if the stock price is behaving like this, it may increase in the future, if the stock price is behaving like this, then it may decrease in the future, but how can you say so. Whenever we say these things or we conclude these things, in the backup of the mind what we feel that it may happen in the future, because it was following this particular trend since last ten years or 5 years, but it may not happen.

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Challenges to Technical Analysis

- Assumptions of Technical Analysis
 - Empirical tests of Efficient Market Hypothesis (EMH) show that prices do not move in trends
- Technical Trading rules
 - The past may not be repeated
 - Patterns may become self-fulfilling prophecies
 - A successful rule will gain followers and become less successful
 - Rules require a great deal of subjective judgement

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It because what decision or the judgment what we talk about, that generally, already **is** has involved **this** some of the subjective mentality, subjective factors what I felt about this particular asset or particular stock. So, therefore, what we can say, sometimes it is a great challenge to the technical analyst, to use certain subjective factors, which can also play the significant role, but still our judgment process should not be subjective, it should be very much quantifiable.

And if the subjective factor is there, then obviously what will happen, it may debit, I am not saying that there should not be any kind of subjectivity whenever the investment decision is taken, but whenever we take the decision, if you analyze this subjectivity in that context, what generally we should say that there should be some, there is a **(())** of deviation in that particular context.

If the deviation is there, then we cannot say that this particular rule always prevails in the market for the investment decision. So, in this context, what you can say that according to technical analyst, the stock cycles typically go through a peak and tough.

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Technical Trading Rules and Indicators

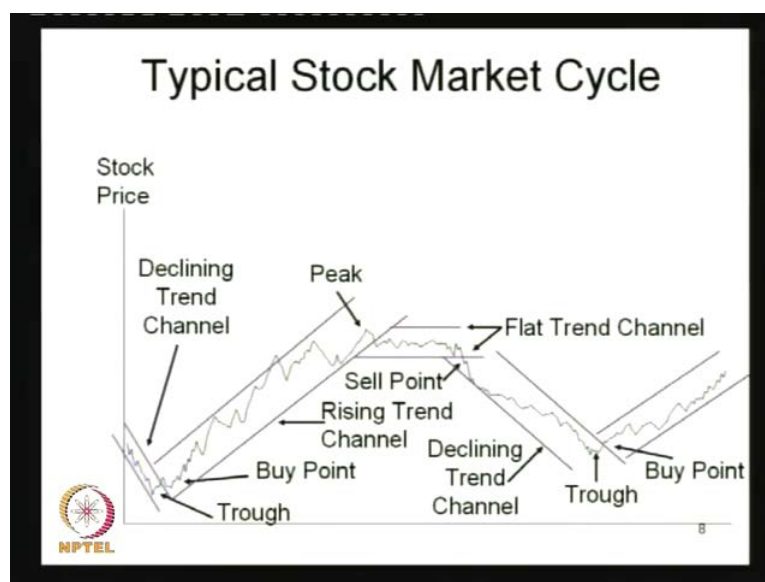
- Stock cycles typically go through a peak and trough
- Analyze the following chart of a typical stock price cycle and we will show a rising trend channel, a flat trend channel, a declining trend channel, and indications of when a technical analyst would want to trade



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So, in this context what we can say that analyze the following chart of a typical stock price cycle and we will show a rising trend channel, a flat trend channel and declining trend channel and indication of when a technical analyst would want to trade.

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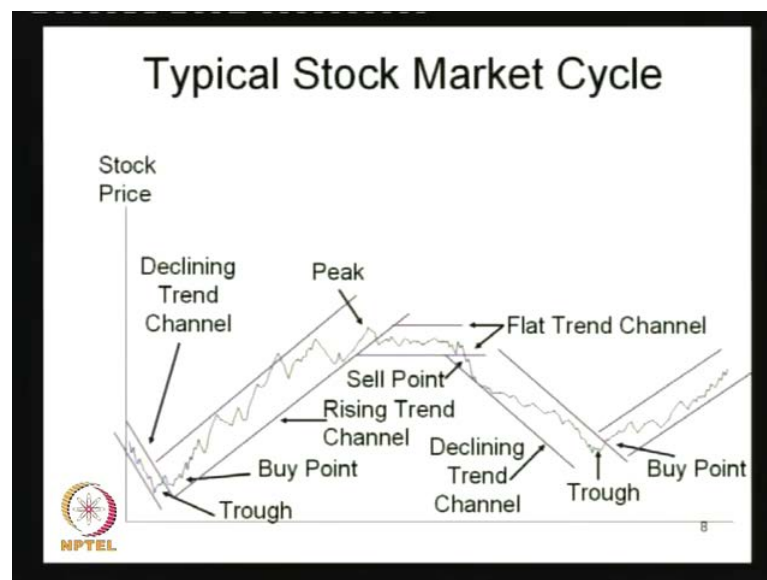


So, you just see this example in this context. If you see here, that in a particular if this is your time period and this is your stock prices and this previously what we have observed that if you start the prices from here, this price, there is a declining trend that is why there is a declining trends channel here. Once the prices has gone up, what we have

observed that there is a inclining trend gradually, although there is little bit fluctuation, it is because of adjustment and the flotation costs.

What we have observed? There is a peak, which is prevailing here, then once we reach the peak, may be some times it can go for a flat trend channel, so it follows a flat trend in this particular period, still there is fluctuation, but still more or less the trend is flat. Then finally, **whenever** again we have observed that there is a declining trend and finally, it has reached the trough, trough in the sense this is the lowest point, here this is the trough, this is the lowest point.

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And this is the maximum point, which we will call it to the peak, once it will reach the peak, basically it follows a flat trend or it may also go down immediately, but first it has gone down, but then it follows a flat trend, then finally it has again gone down which follows the declining trend.

So, if this is your declining trend and finally, it has reached the trough, then what has happened in this context that the trough again as gone through this here, there may be stock price, may be you can buy whenever wants it to the trough, because they just sounds that it will go up, but once **it is** it has reached in the peak, still **there has** there is sums that will you can sell the stock.

Because, immediately in that particular time, we are expecting that the price may go down and finally, what has happened that, we have reached this trough and this is your buying point and again once it reached the trough and again it will follow an increasing trend in the future. So, if you this kind of fluctuation you will observe in a particular stock market cycle, it is basically a typical stock market cycle and almost all the technical analyst believe in this philosophy and they follows this particular trend in such a manner to take their decision in the market, when we should buy the stock and when we should sell the stock, in general we call it this is the concept of security analysis.

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So, there are various trading rules, what are the technicians or the technical analysts make. So, the trading rules is like this that first of all the trading rule may have a contrary opinion that means we say that trading against the crowd. The concept of smart money, where we say that attempts to emulate substitute investors, then the other popular market indicators and the stock prices and volume techniques, including the Dow theory.

So, today, we will talking about these two, then in the next session, we will be talking about the popular market indicators or the different types of tools or the instruments what we use in the technical analysis to take the decision when you should buy and when we should sell.

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Contrary-Opinion

- Many analysts rely on rules developed from the premise that the majority of investors are wrong as the market approaches peaks and troughs
- Technicians try to determine whether investors are strongly bullish or bearish and then trade in the opposite direction

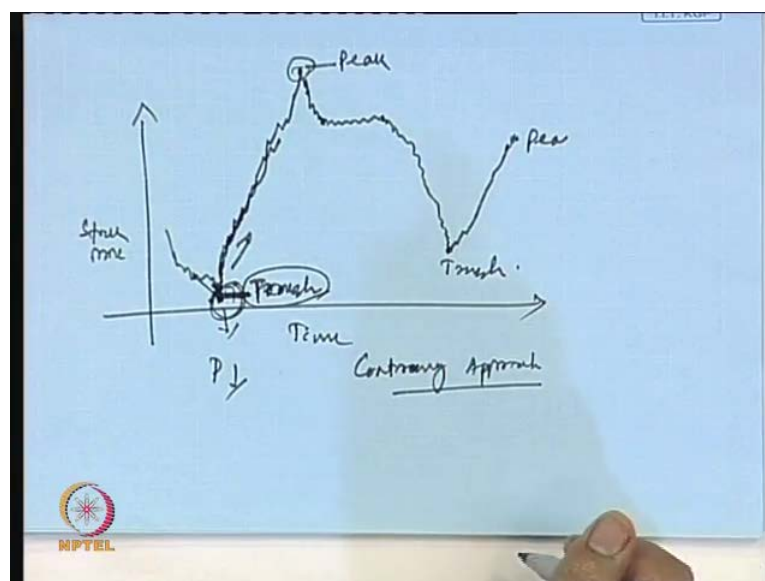


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If you one by one if you see, what basically the contrary opinion means? The contrary opinion is nothing but it basically that the concept or the analysis of contrary opinion, basically relay on the rules developed from the premise that the majority of the investors are wrong as the market approaches peaks and troughs.

Technicians try to determine whether investors are strongly bullish or bearish and then trade in the opposite direction. It is a very very funny kind of philosophy, what we can say in general lighter side, we can say, what generally we say here that if everybody feels that the market will go up, summed up, the people or the technical analyst to believes in the contrary opinions or contrarian approach what they do? They say that this stock price may not go up, this stock price may down, so that is why they take the reverse position in the market and sometimes it clicks also. So, here, the contrary opinion is, once they have made this stock charts and from this stock charts, once they have made this peaks and troughs.

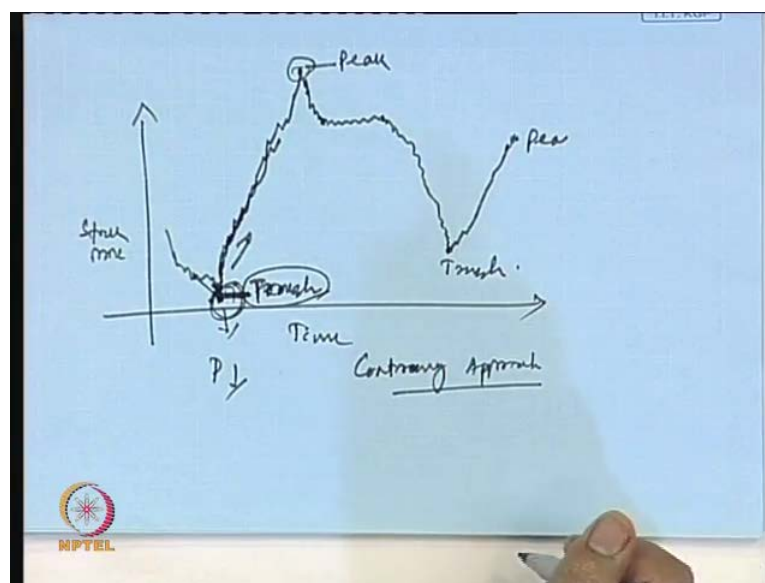
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For example, now what observation, what we have seen, let this is your peak and finally, it has gone up and somewhere **it we have** we have reached the peak, this is your trough and this is your peak, then again it has gone down. May be there **there** it follows **a** this kind of trend, in this flat trend, then again it has gone down and like that it **is** reached the peak, then again it has increased.

So, here, whenever this is your trough and this is your peak, **and** this is your again trough and this is your peak like that and here what we observed that, once it will reach the trough, everybody will observe that it will go up, so it is not necessary that again it will go up immediately on that particular time. So, in this situation what generally the investors do, other investors do? If the market is going down **down down**, they may not reflect whether it is a trough or whether it is a gain, it is there is a suns, it will go down.

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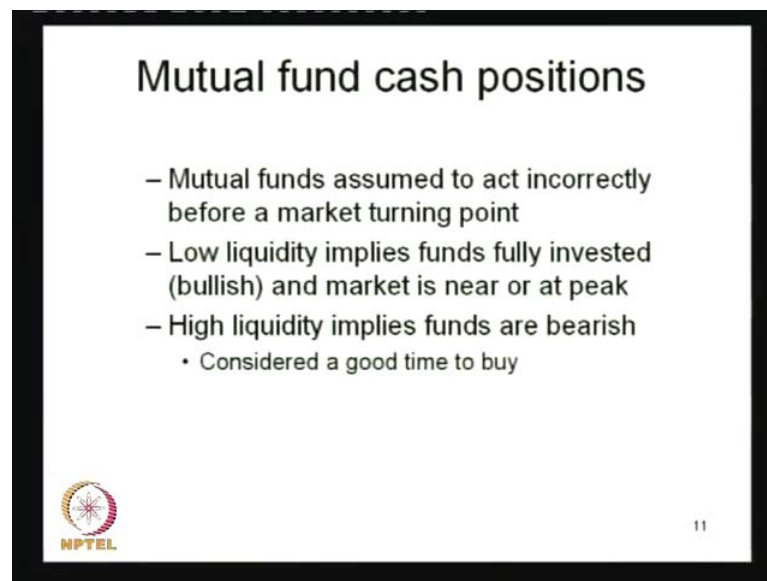
But the technical analyst can believe or can come to know that once it will leave the trough, may be another trend, which is the increasing trend will be followed. So, in that situation, may be some of the investor again feel that the price will go down again, but in this situation, what these people will feel that this price will go up, because already they have used certain techniques to analyze whether there is a bullish trend or there is a bearish trend. If already there is a bearish trend, we are observing that when this bearish trend will be over, that may be all the investor is not able to know, if all the investor are not able to define that when this particular bullish period will be over or the bearish period will be over, so that time they **would** may be misleader by that. On that time, the contrary approach, the contrary approach may be used or may be best suited approach in the investment decision making process.

So, therefore, these advantages the technical analyst can take, because they believe in these bars and stock market cycle and the charts diagrams and etcetera. And once they plot this particular trend after certain period of time, they can say that whether this particular price will follow increasing trend or **the** decreasing trend after this particular point.

So, in this context what we can say, may be other investors are misleader by the trend, but still this people will not be misleader, because they have analyzed this previous pattern and the previous pattern shows that now once it will be the trough, then price will


go up. So, which is judged by, detected by the technical analyst people, but it may not be detected by the other people, so in that context we can say the contrarian approach followed by the technical analyst. That means, if everybody believes that the price will be go down, they believe the price will go up, if everybody believes that price will go up, they believe the price will go down and that also most of the time is successful in the market, that investment philosophy clicks in the market most of the time.

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Mutual fund cash positions

- Mutual funds assumed to act incorrectly before a market turning point
- Low liquidity implies funds fully invested (bullish) and market is near or at peak
- High liquidity implies funds are bearish
 - Considered a good time to buy

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Another approach is basically the mutual fund cash position, another indicators generally, whenever we talk about the contrarian approach, here some of the another indicator we say, which are different indicators, which help the technical analyst to decide whether the stock price will go up or go down, one of them is basically we say that the mutual fund cash positions.

So, in the mutual fund cash position what generally it happens that, the mutual funds assume to what incorrectly before a market turning point, low liquidity implies funds fully invested, that means it is bullish and market is near or at peak, high liquidity implies funds are bearish, consider a good time to buy.

It is very interesting that if you observe that the mutual funds cash position is quite high, the liquidity position in the market is quite high, then what it happens that now the funds are very bearish in nature, that means this is consider a good time to buy, because the

price may go up in the future, but if the low liquidity, that is cash constant by the mutual funds, then obviously that time what this technical analyst believe that the market is near or at peak.

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So, that is the indicator of the turning point that means we refer whether the market is in the peak or it is in the trough that basically sometimes the technical analyst get out of the mutual fund cash position in the market. So, here, what we have seen that mutual fund cash position is linked to the liquidity and if you see that the cash position is quite huge, so that time what we can observe that they may be in the near future the market is going to be bearish, so that is why they said it is better to buy the stock, it is a good time to buy.

So, everybody believes in that time the market is good, liquidity position is high, the market will go up, but in this context, in the contrarian approach or **or we can** the **contrary** contrarian philosophy, what this technical analyst use, according to them what generally they say. It is better that we should go and take this particular situation or particular decision **in that a** that time, that situation that we should buy the stock, it is because that the stock price may go up.

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Mutual fund cash positions

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So, then another situation is that, because sometimes also the reverse situation, whenever we feel that, everybody believes that this is a bearish market, because there is a low liquidity and we can say that the market is again going to go **go** up. So, it is better not to sell the stock about that time, this contrarian people believes that we should sell the stock.

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Credit Balances in Brokerage Accounts

- Credit balances result when investors sell stocks and leave the proceeds with their brokers expecting to reinvest them shortly.
- Technical analysts view these credit balances as potential power, a decline in these balances is considered **bearish** because it indicates lower purchasing power as the market approaches a peak. Alternatively a buildup of credit balances is an increase in buying power and a **bullish** signal.



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Then another indicator also we have or the technical analyst believe the credit balance is in brokerage accounts. What do you mean by the credit balance is in brokerage accounts?

The credit balance is basically result when the investors sell the stocks and leave the profits with their brokers expecting to reinvest them shortly. Once you have started the investment, for example, you have sold the stock and whatever money you got and whatever gain you got, that gain **if** you keep it with your broker. And why you are keeping it with the broker because, you are expecting that again you are going to reinvest that money in the future, in a short span of time.

So, therefore, what generally we say that, if the technical analyst view, **this** if this thing happens in the market, technical analyst view this credit balances as potential power. A decline in this balances is consider bearish, because it indicates lower purchasing power as the market approaches a peak. Alternatively a buildup of credit balance is **is** an increase in buying power and the bullish signal that means what? It is very clear, if more money will be kept with the brokerage account, that time what you are expecting, you are expecting that the again the price may be in the newer future this particular investors are ready to buy the stock.

And once they are ready to buy the stock what does it mean? It means that the market is going to be bearish that is why they are going to buy the stock and once they **will going to they they** will buy the stock even in the near future, they can get the benefit out of this. But if the more money will be kept there, so in that situation we can realize this, but if the less money is kept there, that means what we can say, there is less potential about the market, so that is why what generally the investors do, the investors generally took their money from them.

They generally take out their money from the brokerage funds and once they will take out this particular money from brokerage funds, it is because there is no potential in the market that the market will go up, that is why there is no chance that **there** they should invest in the market.

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Investment Advisory Opinions and the Ratio of Trading Volume

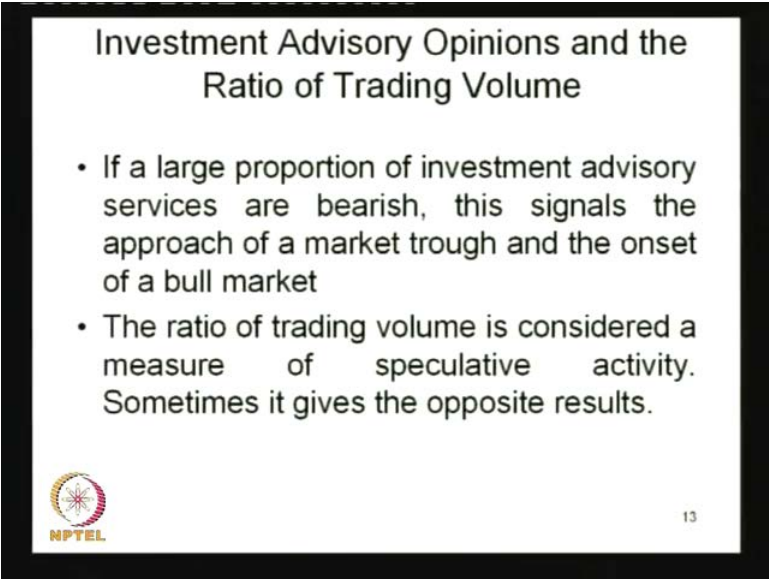
- If a large proportion of investment advisory services are bearish, this signals the approach of a market trough and the onset of a bull market
- The ratio of trading volume is considered a measure of speculative activity. Sometimes it gives the opposite results.

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Then another approach is our investment advisory opinions and the ratio of trading volume. So, here, this approach what we do or the technical analysts do, if a large proportion of investment advisory services are bearish, this signals the approach of market trough and the onset of a bull market, the ratio of trading volume is considered a measure of speculative activity. Sometimes it gives the opposite results, so that is why what generally we say that if most of the companies, the companies who gives the investment advices, investment advisory services, if you find that everybody believes that the market is bearish, is going to be bearish, this signals that now the market is going to reach the trough and obviously, there **is** its sums the market will go up.


That means, in that time the other people believes that the market is going to be bearish, that time the **the** people from the technical analysts or the people who believes in the technical analysis, they feel that now there is a chance that the market will go up, it is better to buy the stock which can perform better in the market.

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Investment Advisory Opinions and the Ratio of Trading Volume

- If a large proportion of investment advisory services are bearish, this signals the approach of a market trough and the onset of a bull market
- The ratio of trading volume is considered a measure of speculative activity. Sometimes it gives the opposite results.

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Then another good indicator we have, the technical analyst also use, that is your put call ratio and future traders bullish on stock exchange futures. What it basically means that, the contrary opinion technicians use put options, which give the holder the right to sell stock at a specified price for a given time period, as signals of a bearish attitude. That means, why you wanted to sell this particular stock, it is because in the future the market may go down, so that is why it basically **it** talks about a bearish attitude and a higher put call ratio indicates a pervasive bearish attitude, which technicians consider a bullish indicator.


Although they believe that the higher put call ratio indicates a bearish attitude, but the technicians that time they say that the bullish indicator using their own contrarian philosophy. So, when the 70 percent of speculators are bullish, the contrary opinion technicians say it is bearish market and it is a bullish signal when this declines to 30 percent.

So, there are certain threshold mark, threshold limit's what they have defined, so accordingly they say that if you observe that there is a 70 percent speculators, 70 percent of speculators believe that their bullish, the contrary opinion technicians that there is going to be a bearish market and they believe it will be bullish whenever the other people will have **the** a chance **is** of 30 percent, they believe that the market is going to decline by the 30 percent.

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Follow the Smart Money

- **Confidence Index:** Ratio of average yield on top 10 grade corporate bonds divided by the yield on Stock markets' average of 40 bonds. If ratio is high it shows the bullish sign and if its low it gives the bearish sign.
- **T-Bill-Eurodollar Yield Spread:** It measures the investor's confidence. If it declines, the stock market experiences a trough shortly thereafter.
- **Debit balances in Brokerage Accounts (Margin Accounts):** An increase in debit balances implies buying and it is considered a bullish sign while decline in debt balance would indicate selling by the investors and would be a bearish indicator.

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Then another concept is basically they follow the smart money, what is basically means, there are certain indicators we use in this context, one is your confidence index, then your T Bill Eurodollar yield spread or we can say the yield spread even Indian context, the debit balances in the brokerage accounts. What basically the confidence index is, it is basically the receiver of average yield on top ten grade corporate bonds divided by the yield on stock markets average of forty bonds.

If the ratio is high, it shows the bullish sign and if it is low, it gives the bearish sign, it is very clear cut mark what they have mentioned. Then the t bill Eurodollar yield spread, what it means? It measures the investor's confidence if we declines the stock market experiences a trough shortly thereafter.

So, then third one is the debit balances in brokerage accounts, already we talked about the brokerage accounts and other name is Margin accounts. So, on increase in debit balances implies buying and it is considered a bullish sign, while decline in debit balances, we indicate selling by the investor and would be the bearish indicator.

So, these are also the indicators what we use in the market to take the decision whether we should invest in this stock in terms of a buying or the selling. So, here what we have observed that the technical analyst or the strong believer **of the** or we can say they are highly dependent on the past trend and they believe that the stock price reflects

everything, and always the trend follows a reasonably for a period of time. And this particular trend persist for a reasonable time period, that is why what we can say that if that inertia or that particular persistence always there in the market, so you can relay that particular trend accordingly, we can take our decision in the market that way.

Then another thing is what we can say that, whenever we talk about the market situation or we talk about the fundamental approach, it is quite difficult to go for the valuation of the particular stock because of the uncertainty or the some of the subjective factors which are involved in this, in this particular process, but here those process are not there. And already, also we have seen that the technical analyst have used through some of the very clear cut threshold indicators, which can help us to take the decision in the market.

So, in the next class, we will be talking about the other indicators, may be popular market indicators, what the technicians or the technical analyst use to take the investment decision in the market; thank you.