Behavioral and Personal Finance
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Module – 02
Personal Finance
Lecture – 39
Alternative Investments (Contd.)

Hello there, to continue from the previous session where we were discussing about a different type of Alternative Investments available for investors in this session we will focus more on the role of alternative investment as strategic in asset allocation strategies.

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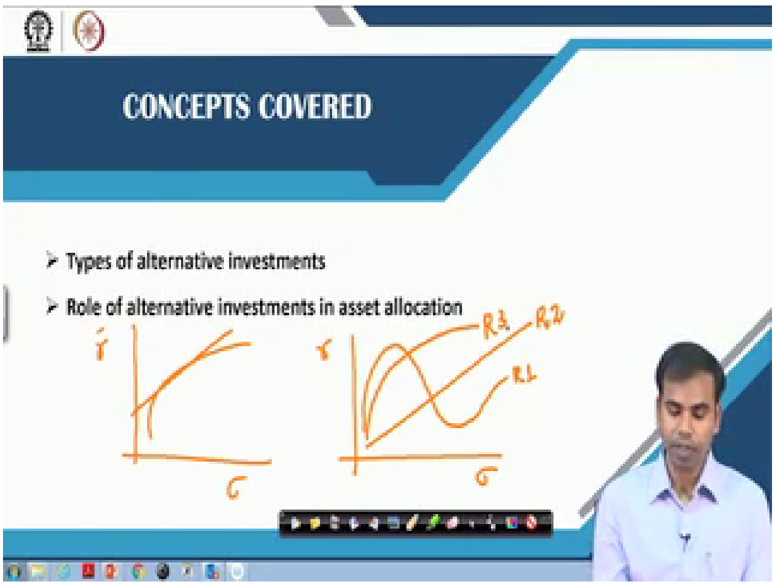

Here we will talk about why investment in alternative assets or alternative investment asset classes are important for diversifying your portfolio in order to achieve risk and return. So, earlier we discussed that a traditional investment portfolios are invested on the basis of optimizing risk and return where, we know that the risk and return could follow a certain trend based on the portfolio optimization strategy.

In alternative investment as we know the classes of assets that are available for investors are such that it would not follow a linear or a quadratic sort of a trend where, you will always have a positive and increasingly growing rate of return with the level of risk. Here the situation might be such that in some time for certain amount of risk you will have a return that might move like this.

On the other hand, you might have a return which will move like this. So, basically which could be a return that is increasing with the level of risk that you assume a return that might be growing for certain level of risk and then as you increase your risk level in investment the return might go down.

And also, it could be a quadratic or exponentially growing such that the more return risk you take the more return you generate. So, this is why alternative investments as investment avenue or as the part of your portfolio should be always considered carefully before you actually invest in.

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Continuing that discussion would like to know more about why, what is the role of alternative investment in portfolio allocation strategy? We have already discussed about different type of alternative investments if you recall we discussed about hedge funds as alternative investment in terms of modern alternative investments. Hedge fund could be Tactical or Even driven or Relative value hedge funds. These are different type of hedge funds that are available for investment.

So, when depending on your risk return choice you can invest your money in either of these hedge funds. So, the ultimate objective is to have investment that will have a risk return optimization for any investor. So, the ultimate objective or ultimate criteria should be optimizing risk and return which is basically, shown in the typical risk return frontier graph.

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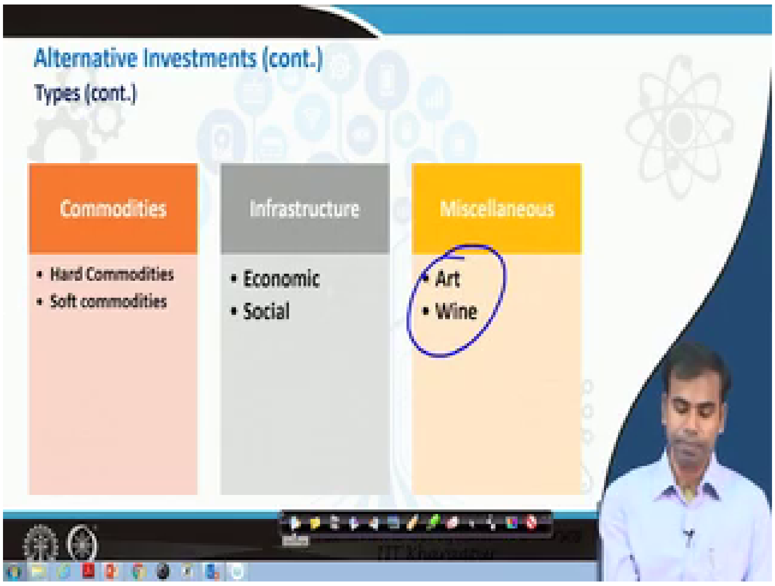

Now, based on your risk return you can choose either of these three categories of hedge funds. There are several other hedge funds for example, but we include three hedge funds here, tactical which are basically skill set based or the hedge fund that has certain objectives to achieve it with the objective could be multiplied your return by 100 times or it could be a growing your investment value to 100 times and so on.

There are hedge funds that will be dependent on certain events for example, if there is some amount of default happening in banking sector a hedge fund can take a position based on that, there are relative value hedge funds which has certain investment exposure to an asset which will have some valuation connected with some other investment portfolio.

So, there are these are hedge funds where investor can invest their money, then second category of hedge fund is private equity. As we know Private Equity is basically, the investment done in companies which are publicly held or privately held or companies which have some exposure to the investment pool available from private equity investors.

It could be in the form of venture capital or buyout capitals. So venture capital we know that they are investment channels or investment funds or a pool of investors that invest their money in typically, privately held forms and they want to invest in privately held forms in order to secure certain amount of ownership. So, that when the firm goes public typically, they sell their ownership and earn substantially high return.

It could be buyout capital as well. Then we have private debt could be in the form of distressed debt or direct lending to any an existing an enterprise. We have already discussed about Real Estate where we learnt about an direct or indirect investment in real estate for an investor could be part of their alternative investment portfolio.

This investment is could be in commercial or residential or as indirect ownership through REIT and so on, these are our ways of alternative investment in these asset category, there are other alternative investment that we have already discussed in the form of commodities could be hard commodities such as, gold silver platinum or agriculture product or could be soft commodities.

Then we have investment choices in Infrastructure and other alternative asset classes such as, art and wine these are also another form of investment for people who have substantially a high amount of money or investable fund. So, they would like to invest in arts various forms of arts and they also like to make some investment in wine.

Since these are assets where valuation is not very straightforward and simple. So, investing in these type of assets or alternative investment would always carry a high amount of risk. Having learnt these, different type of alternative investment we should focus more on the reasons; why alternative investments should be held?

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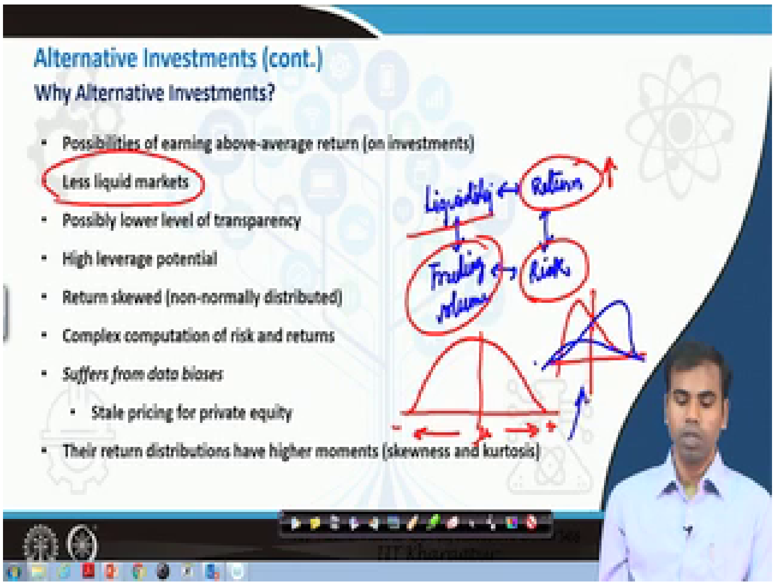

Now, here we list down certain reasons for which investors should or would hold their investment in alternative asset classes. So, first and foremost objective is to earn or the possibility of earning above average return on investment because of information asymmetry or any other reason alternative investment assets provide you an opportunity to earn substantially higher return.

For example, in real estate or could be in commodities or another example could be investment in bitcoins. So, these assets provide you an opportunity to earn substantially high return another feature is it is very less liquid. So, when we talk about liquid essentially, we mean that there is very less trading or less exchange happening in this these, type of mark asset markets.

And because of which there will be very few people participating in the exchange or trade of such investments. So, less liquid or low liquidity in these asset classes increases the risk because we know that the liquidity as we know liquidity is directly related to return and risk. So, and then we also have another way to know is trading volume.

So, this this type of relationship have already been established in empirical research in finance which shows that if the trading volume is high the assets are known or the markets are known to be highly liquid. And if they are highly liquid the possibility to earn substantially high return is very low and this is also attributed to low amount of risk.

But when there is no not much trading volume it implies that the markets are or the asset class is less liquid that increases the chances of earning substantially high return at very high level of risk, because for example, suppose you hold some investment in a piece of art now, if that piece of art is unique you know that there will be very few people who would be interested in buying that art from you.

So, unless you find an interested buyer who would be willing to pay the price that you would want you cannot sell that piece of art in market which means there is less trading volume and hence less liquidity. Now, less liquidity means unless you find a buyer who is interested in willing interested and willing to pay the price that you want you cannot generate substantially high amount of return and that is why it is very risky.

So, the moment a market is or an asset class is less liquid it implies that it has substantially high amount of risk and at the same time in this example of art if you found a person who has been desperately looking for that particular piece of art and he or she found that art with you he or she would be willing to pay whatever price you would ask for.

So, in that case the amount of earning substantially high return on that investment is really high. So, this is what this less liquid markets in terms of alternative investment feature provides these, scenario to the investors. At the same time such markets and asset classes also have lower level of transparency because people in invest and trade at in a very low frequency.

So they do not exchange information and most of the time information is not available, you must have heard of scams and other frauds related to pieces of art or paintings of famous painters where, people have been sold the paintings of celebrated painters at a very high price, but apparently those paintings turned out to be fake or counterfeit.

So, this this is another possibility or a result of lower level of transparency you can exploit alternative investment class as high leverage potential market because, you have an opportunity to leverage on the availability of debt and other sources of funds return is very skewed as usual because you cannot have a symmetric distribution of return.

So, there is non-normally distribution of return associated with alternative investment and when we talk about non normal distribution, we essentially mean that if this is the mean return of certain asset the distribution is normal or not normal.

So, basically the dispersion around both sides of the mean or the average return is not symmetric it could be a function where, the return might be skew towards one side or it could be skewed towards other side or it could be a spread for a wider range of dispersion.

Alternative investment market also suffers from data biases because for example, in private equity markets stale prices could be one reason why investors might lose lot of money; it originates from biased valuation or the data availability in terms of stale pricing.

Their return distributions have higher moment skewness and kurtosis might be distorted as explained in these cases where, the return distributions are not normal and hence skewed or leptokurtic or other similar features. So, these are reasons why alternative investment provide higher amount of risk, but at the same time it also provides you an opportunity to earn higher level of return.

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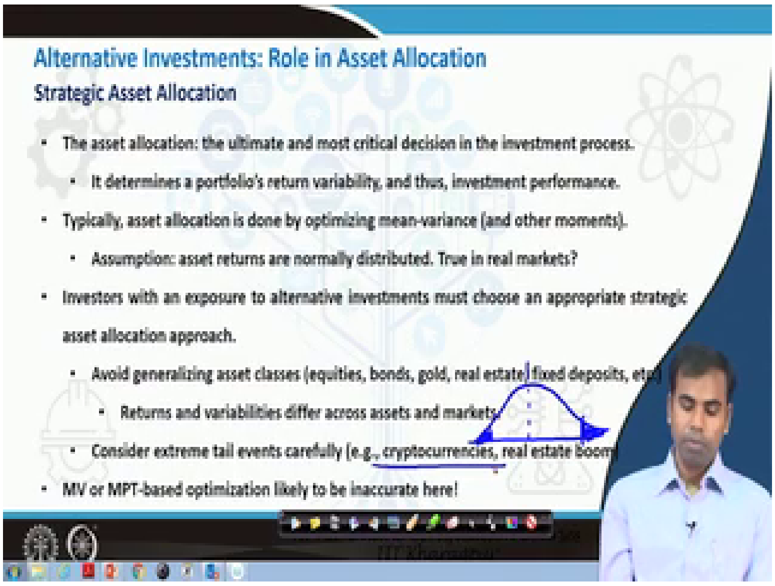

Now, when we talk about a role in asset allocation for these alternative investment we know that asset allocation is ultimate and most critical decision for any investment process. It basically, determines the portfolio return variability because it depending on how you choose your asset allocation strategy you will generate certain the amount of return.

So, it determines your investment performance also typically, asset allocation is done by optimizing mean variance if you recall from previous session we have discussed that how mean and variance can be optimized to arrive at the weights allocated to different asset component in our portfolio.

Here we assume that asset returns are normally distributed if this is not true then the possibility of asset allocation based on mean variance optimization might also not be true. So, for traditional assets such as equity and bonds asset allocation using mean variance optimization might work well, but for alternative investment the strategy of asset allocation using mean variance optimization might not be working perfectly.

Another factor that we should consider as an important for asset allocation is that investors with an exposure to alternative investment must choose an appropriate strategic asset allocation methods basically, they should try to avoid generalizing asset classes. So, you cannot consider equities or bonds or gold or real estate and other asset classes at par because return and variability is differ across assets and markets.

So, you cannot assume that all asset classes have same distribution of return we have to be very careful to generalize the asset class properties if you are considering extreme tail events basically, the extreme tail events indicate the level of distribution of your assets and what is happening at this type of tail or this type of return.

So, basically you are trying to understand the extreme tail events in this case and if you are doing so you must be very careful as happens in alternative investment cases such as real estate boom where, you were sold certain real estate properties with the hope that the property prices might go really up in future and apparently because of certain regulatory restrictions or any other reasons the property prices have gone down instead.

You must have come across news where certain real estate developers have been in trouble because of availability of funds and now the properties are not sold and those who have already invested in those properties are not getting their investment back.

Similar, case was of cryptocurrency where, in one a couple of years ago the cryptocurrency market was booming like anything and people have been really bullish about investing in cryptocurrencies but because of certain regulatory requirements or regulatory restrictions of late the cryptocurrency market has gone down.

There are certain other factors are responsible for crypto currency markets, but the point here is if you are considering extreme tale events as a feature you must be really careful while, you are trying to use this as asset allocation strategy. And finally, Mean Variance or Modern

Portfolio Theory given by Markowitz these optimization approaches are likely to be totally inaccurate in case of alternate investment.

In traditional investment in asset classes such as equity bonds and other traditional investments these approaches such as mean variance optimization or any other higher moment optimization as well they work perfectly fine. But here it might not work so well.

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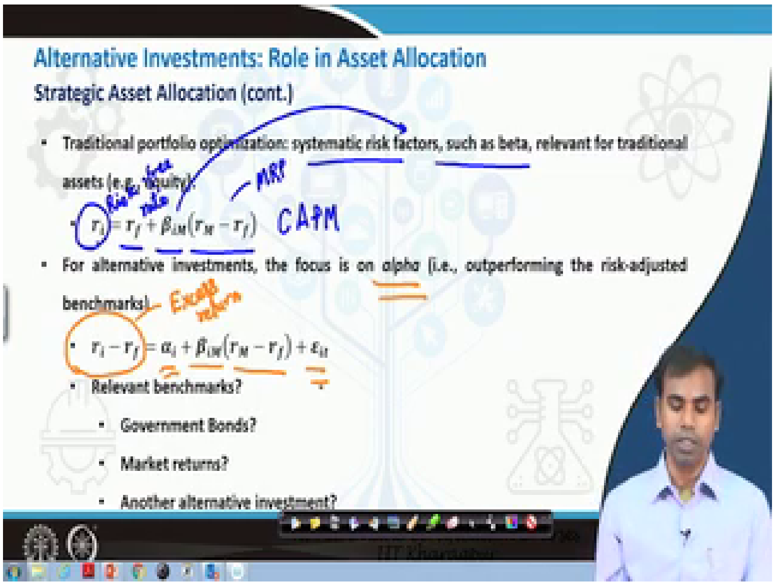

The basic mathematics behind why it might not work well is discussed here. So, we know that traditionally we try to optimize portfolios based on mean and variance and we considered that systematic risk factor such as beta might be relevant for traditional asset. So, if you remember this is CAPM that is Capital Asset Pricing Model which gives us a expected rate of return as a function of risk free rate systematic risk and market risk premium.

So, if you recall this is market risk premium this is our systematic risk factor and then this is a risk-free rate. So, here the argument is if you invest in asset I you are likely to get a return that is over and above the return on risk free asset with respect to the beta or risk sensitivity or since it is a systemic risk factor we multiplied with market risk premium.

Now, for alternative investment the focus is on alpha which means, you try to outperform the risk adjusted benchmark. So, alpha implies here that if you are trying to get a return over and above your risk-free rate that is your excess return. So, excess returns should be a function of certain systemic risk which is basically, beta market risk premium and then some factor which gives you an advantage over and above these returns and there must be some error some noise which you cannot capture.

So, for alternative investment case you may consider some alpha that is basically, a factor that might outperform a risk adjusted benchmark and these risk adjusted benchmark could be government bonds or may be market return or any other alternative investment return that you might consider.

So, here given the factor that strategic risk in asset allocation strategies for alternative investment could consider on certain factors that might be unique and independent of traditional asset market so. There are several examples where traditional asset allocation strategies have been able to generate more than normal return or better returns when they are mixed with alternative investment or asset classes.

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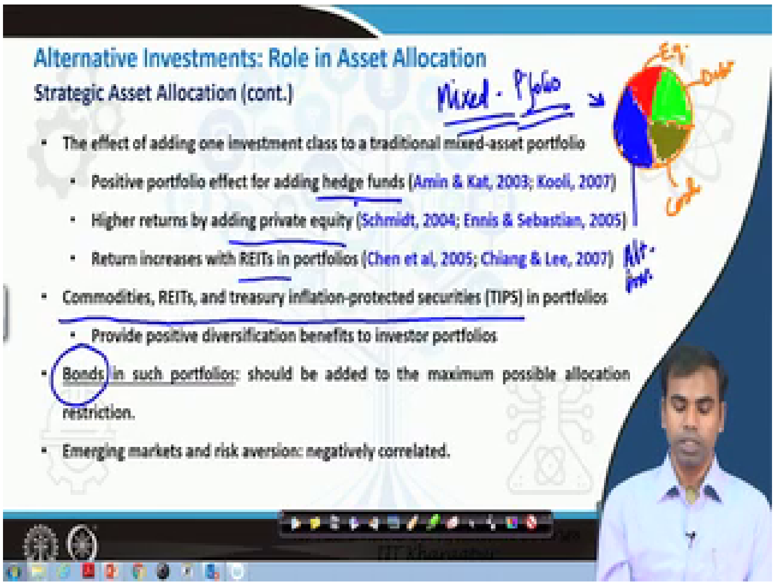

So, here I have mentioned few examples, of the effect of adding one investment class true through to a traditional mixed asset portfolio. So, when you add hedge fund to your mixed asset portfolio which means, you have as explained in the beginning of previous session if you have some amount of money in equity some amount of money in debt some you have cash so remaining investment can be anything now this can be hedge fund.

So, you have a projected portfolio effect which means, the return on such a portfolio. So, this is your portfolio the return on such a portfolio can be higher than the traditional portfolio if you mix hedge fund with this portfolio if you add equity portfolio there are substantially high return as well, if you include REIT which is basically an exposure to Real Estate Investment Trust this part of your portfolio can be REIT and your return increases as well.

These are empirical evidences from different financial markets in U.S and Europe. You can also include commodities REITs and treasury inflation protected securities which are also known as TIPS more popular in Europe and Western markets. It provides you positive diversification benefits to investor portfolio.

So, if you try to diversify your portfolios in such a way that your risk your equity investment works well with the given level of risk. Similarly, you can have some investment in bonds or fixed income portfolio which are basically your investment in assets which have more of fixed income and then you can keep some amount of cash because cash is important for liquidity.

Then the remaining amount can be invested in any other asset class which has certain amount of investment in these alternative investment classes. Now I must clarify here that the proportion of your investment in this example is not necessarily going to be substantially high as shown in this pie chart you can use this based on your risk bearing capacity and the amount of money that you have for investment in these assets.

One unique characteristic of these mixed portfolio is basically, holding bonds to substantial extent. So, this is a mixed portfolio and in these, mixed portfolio we should always hold bonds. Because bonds provide you cushion for earning a basic level of return.

So, this is why it is important to hold bond we have also seen that emerging market and risk aversion are negatively correlated. So, in emerging market this might work even better if you have investment in these, alternative investment. So, this particular part was alternative investment.

Now, that we have understood the features and benefits of adding alternative investment as your portfolio strategy we can move on to discuss, why these are so relevant for people who have or who have intention to earn substantially higher return compared to the traditional portfolio investment.

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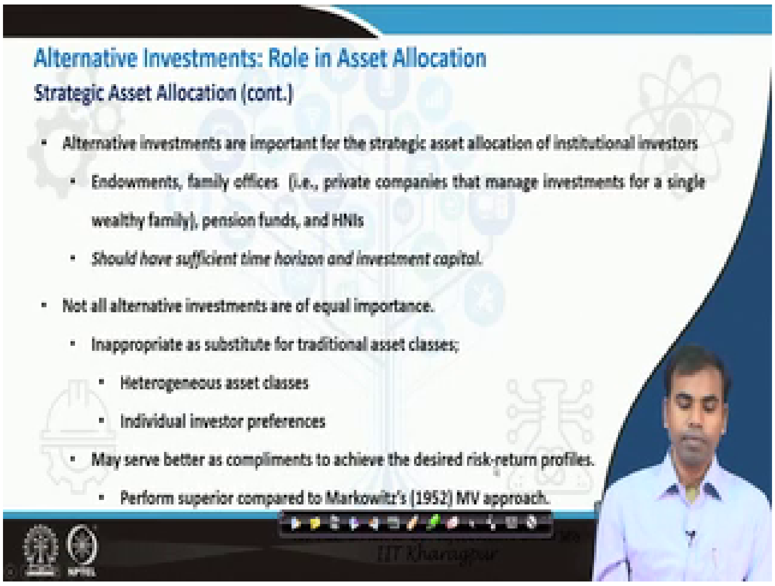

So, we know that alternative investments are important for strategic asset allocation, mainly for institutional investors such as endowment funds or family offices. So, family offices indicate the those, private companies that manage money for single wealthy family, it could be pension also or high net worth individuals.

The restriction or the basic assumption is the family or the investment fund or such institutional investors should have sufficient time horizon and investment capital it cannot work so well with less amount of money. We should also keep in mind that not all alternative investments should be equalized which means, you cannot generalize the characteristic of one alternative investment assets with another alternative investment asset.

It would be inappropriate as substitute for traditional asset classes. So, you cannot have an asset portfolio where you can substitute equity or bond or cash with alternative investment as explained in previous example you should always have some cash that is most liquid asset and a bonds in your portfolio and along with that equity and alternative investment could form some proportion.

The reason is these are heterogeneous they have unique features and characteristics. So, you cannot just replace one asset with another asset it also depends on the preferences of individual investors typically, alternative investment serves better as complement to achieve the desired risk return profile and it provides an opportunity to earn superior returns, compared to Markowitz in 1952 mean variance approach of portfolio optimization.

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So, basically when we talk about the expectation of investors and how alternative investment fit into their umbrella or their portfolio choices we typically depend on whether we can predict the trend in alternative investment markets typically, the trends cannot be predicted as efficiently as we do in traditional asset classes such as equity or bonds.

So, asset since, alternative investment market is very diverse and each of the asset in alternative investment has unique features. For example, real estate could be one such market where the financial characteristics or statistical properties of real estate market in one location might be totally different from that in another location.

So, we cannot just generalize the characteristic of one real estate market or real estate market in one area with the real estate market in another area. It totally depends on tests of investors and other macroeconomic features. Similarly, commodities market are also innocent and we have known it for forever. So, these cannot be generalized there are several other examples including private equity and venture capital as well.

So, the idea is forecasting traditional asset market and forecasting alternative investment asset market is a different ballgame. So, whenever we try to understand the role of alternative investment in strategic asset allocation we should treat this issue with a very high amount of sensitivity towards risk and return preferences of individual investors.

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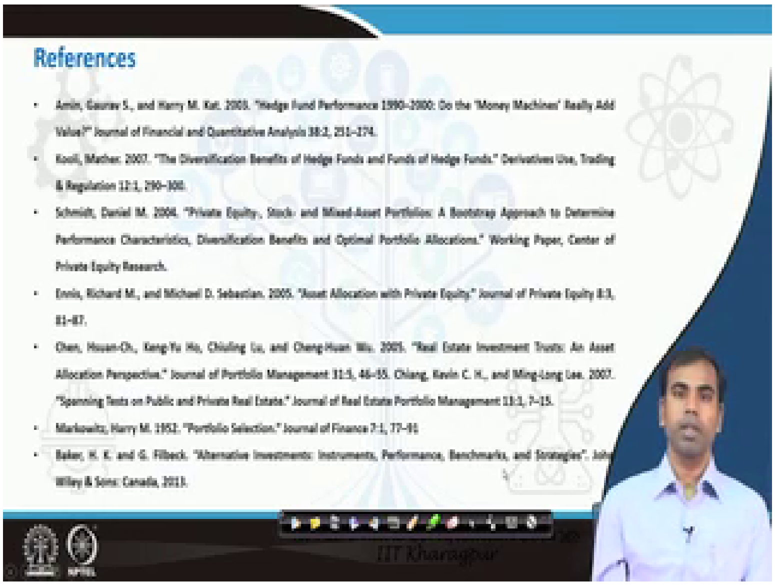

How we include these assets in our portfolios will be discussed in next lecture, for now this is it all the references are listed here that is all.

Thank you.