Finance 527: Lecture 35, Psychology of Investing V2

[John Nofsinger]: Welcome to the second video for the psychology of investing. In this one, we're going to talk about overconfidence. Like this little picture here-overconfidence-this is going to end in disaster, and you have no one to blame but yourself. That is overconfidence.

[On Screen]

Psychology of Investing V2
John Nofsinger

Chapter 2
Overconfidence

[*Image of Overconfidence meme: Cat trying to catch a Bald Eagle-This is going to end in disaster, and you have no one to blame but yourself*]

[John Nofsinger]: Alright so if I asked the question to you and said: how good of a driver are you? Are you better than average, average, worse than average? Or if I asked a similar question: how good of an investor are you compared with you know the S&P 500 index. Are you, you know, around that? Are you a better investor? Are you a worse investor? It turns out that very few people believe that they are below average. Even when I ask a classroom full of 20 year-old juniors in my finance class, they all seem to be average or above average drivers. So nobody is below average. Obviously some people are mistaken. The statistics doesn't allow that to happen. And of course these drivers don't have all that much experience yet anyway. So that is overconfidence.

[On Screen]

Overconfidence

- Question: How good of a driver are you?
  Or
- Question: how good of an investor are you? Compared with the broad market averages, are you above average, average, or below average?
- Few believe they are below average drivers or investors
  - Obviously, many people are simply mistaken. People are mistaken because they are overconfident about their skill and knowledge

[John Nofsinger]: So psychologists like to use the word overconfident, overconfidence. And they mean something very specific. They either mean some sort of miscalibration that is in the exercise we did in the previous video with the questions and you had a 90% range-minimum and maximum-that ranges are too tight that we misunderstand the likely potential range of the possibilities. So that's a miscalibration kind of thing. The other one is the better-than-average

effect, which was just kind of illustrated with the driving in the previous slide. We have an unrealistic positive view of our skills or our knowledge compared to others. So this is what they mean by overconfident.

[On Screen]

- Psychologists have determined that people can be overconfident
- Miscalibration-probability distribution too tight
  - Likely range of possibilities
  - Confidence intervals
- Better-than-average effect
  - Unrealistically positive view one's skills, knowledge

[John Nofsinger]: So what does that mean in the investing world? Well overconfident investors are gonna trade too much. Right that is if you think you're really good at investing, the only way to use that positive skill is to actually do things-act-well that's trading okay. We're gonna show that they end up getting a lower return as a result of all this trading. And we're also gonna say that they take too much risk. After all, if you believe you really know what you're doing, then maybe you don't believe you're taking as much risk as you really are.

[On Screen]

Overconfidence and Investing

- Overconfident investors
  - Trade too much
  - Get lower returns as a result
  - Take more risk

[John Nofsinger]: So the excess of trading part-the excessive trading. We're just too certain about our opinions-we're overconfident okay. The precision of information, and we're too overconfident that this information we have is indeed as precise and is important as it really is. And then we believe of course we have a great skill in interpreting this. Now the interesting thing that psychologists have shown is that in masculine tasks that is in a society where certain tasks are viewed as masculine that's what the men tend to do that type of career or those kinds of tasks. So it could be different for different societies. But in a masculine task in one society, men tend to be more overconfident than women in that task. So investing in finance in the United States culture has been perceived as a masculine task. I would say that given the expanding and increasing women that I have in my undergraduate classes that it may not be considered that you know decades from now. But in the past, it certainly has been considered a masculine task.

[On Screen]

Excessive Trading

- Overconfident investors trade too much because they are too certain about their opinions
    - Precisions of information
    - Skill in interpretation
- In masculine tasks, men are more overconfident than women
    - Investing is perceived as a masculine task\

[John Nofsinger]: So looking at the actual trades from a stock brokerage account, we can see do men trade more? And so this is a measure called portfolio turnover. So what let's say 70% means. 70% means that if you had 10 stocks at the beginning of the year, you sold 7 of them and replaced them by buying an additional 7. You would have turned over your portfolio 70%. K so that's what that means. We see that single women turnover is about 50% in their portfolio. And single men are up here around 85%. So a big, big difference suggesting that men certainly trade a lot more. It could be attributed to overconfidence. And you see that married women about the same as far as their portfolio. Married men however, their portfolio turnover declines, which might mean that women make men less confident. Or maybe not I don't know.

[On Screen]

Turnover and Overconfidence

[*Image of a graph of gender and marriage status vs. Annual Portfolio Turnover*]

[John Nofsinger]: Okay is trading bad? Okay so if we trade more big deal. Well what this does is it sorts-doesn't matter if you're a male or a female-it sorts people's portfolios in sample by how much trading goes on. So you have the 20% that doesn't trade much at all all the way to the 20% that trades a lot. And the actual return they get from the stocks-the stocks they pick-there's not much difference in the five portfolios. But the net return is much lower for the high trading people. So there is this cost of trading right whether it's a big ask cost-big ask spread-or whether it's a commission cost or whether the attention and details of buying and selling all the time, whether that just causes our biases to come out even more in a negative way. But yes trading does cost. Trading is bad so to speak.

[On Screen]

Is Trading Bad?

[*Image of graph of high and low turnovers vs. annual returns*]

[John Nofsinger]: So if comparing without the you know married verses non-married-if you just look at all men verses all women-the trading for women the turnover is about 53% compared to 77% for men. And if you look at risk-adjusted returns, right alphas we could call those. We see that of course there are costs of trading. We do have to pay commission costs and these kinds of things. But the cost for men are much more than the cost for women. So men trade more and

they have a lower or more negative alphas as a results, which does suggest that men are more overconfident when it comes to that.

[On Screen]

Men Trade (And Lose) More Than Women

[*Image of graph of women and men vs. their annual turnover*]

[*Image of graph of women and men vs. their annual risk-adjusted returns*]

[John Nofsinger]: There was a very interesting study that looked of a sample of people that had speeding tickets, and then they investigated their portfolio to see the trading. And indeed they found that those people who have more speeding tickets also trade more. So there might be some sort of thrill component to trading that they're trying to satisfy.

[On Screen]

Those Who Speed Also Trade More

[*Image of car*]

[*Image of businessman on phone reading the newspaper*]

[John Nofsinger]: Overconfidence also affects risk. Overconfident investors systematically under-estimate the level of risk that they're taking. The idea there is if you really believe you know what you're doing on a high level, then maybe you feel like you're not taking as much risk as you really are. Riskier means things like initial public offerings, smaller companies, new firms, those kinds of things are all riskier, more volatile, higher beta, those kinds of things as well. And there's nothing wrong with taking more risk especially if you're well diversified, but they tend to be under-diversified in fact. For example, the portfolio of single men-their stocks on average-have the highest risk measuring risk in the volatility of their portfolio returns, the beta of their portfolio, and they tend to own smaller firms on average. Or if we just resort things instead of by gender, we do it by the high turnover group verses the low turnover group, that the high turnover group the ones that would be experiencing overconfidence, they also invest in riskier stocks as measured with smaller firms and firms with higher betas etcetera.

[On Screen]

Overconfidence Affects Risk

- Overconfident investors systematically under-estimate the level of risk they take
  - Own risker stocks (IPOs, smaller firms, newer firms, etc.)
  - Under diversify

- The portfolio of single men have the highest volatility and beta, and smallest firms
- The high turnover group invested in smaller firms with higher betas

[John Nofsinger]: Interestingly enough that it's not just us individual investors that can be overconfident, professional money managers can too. The professional-the average mutual fund turnover is about 77% so that puts it right up there with the kind of the men. But more than that, an interesting study looked at what happened to the mutual fund winners last year, right? The mutual funds that did the best-had the highest return last year-they might have a reason to be confident. Right maybe even overconfident. What happened to them? Well as it turns out that next year-right the year after this winning return-their portfolio is much higher. So they start trading more and also the year after they under-perform by 1.8%-a negative 1.8% alpha as far as a return-an abnormal return goes. So after this great performance, they maybe have a reason to be too confident. We do see higher trading. We do see lower performance definitely the idea that they can get overconfident.

[On Screen]

Professional Money Managers….

- Are overconfident
  - Average annual mutual funds turnover is 77%
  - Average turnover for this year of last years winners, 93%
  - Mutual funds under-perform their benchmarks by an average 1.8% per year
  - Controlling for company size, institutions like higher volatility stocks

[John Nofsinger]: Looking at one last study. Back in the early 90s when they were just inventing or coming up with nice online broker platforms, a discount broker took 1600 of its best investors and asked them would you try on our new online broker service? You know kind of trade there for a while, experiment see how it all works. So before they were asked to-again they were good investors-they were beating the market by 2.4% a year on average right. So out of all their investors they picked the good ones for this. And their turnover was about 70%. After going online, their turnover jumped to 120%. So they had 10 stocks, they sold them all, bought ten, sold 2 more and replaced them by the end of the year. So a lot more trading, and they ended up underperforming. So one of the things that I think is not the greatest thing in the world is the internet trading allows us to make a lot of decisions-there's no gatekeeper-there's no calling anybody-nobody to question what you're doing. And that might allow our biases to be magnified.

[On Screen]

Impact on Return

A study of 1,607 investors which moved from a traditional discount broker to an online broker service.

- Before going online:
  - Average turnover was 70%
  - Beat the market by 2.4% per year
- After going online:
  - Turnover jumped to 120%
  - Underperformed the market by 3.5% per year

[John Nofsinger]: Okay and so often what the internet can do is it can lead us to some of our biases of illusions. There's two of them I wanted to talk about. One's the illusion of knowledge. The illusion of knowledge is this illusion that we think that having more information creates more knowledge and therefore better predictions. Well this is not always true. Right if I ask you to predict whether this coin is gonna end up being a heads or a tail, you don't know. I don't know k. Alright I'll give you more information. I'll tell you the last 5 flips of the coin right, which was tails, heads, heads, heads, tails. Okay you have more information. Do you really have more knowledge or more ability to predict? No so more information does not always lead to more wisdom and more predicting and more ability to predict. Of course the internet is now is full of information. How much of it is true? How much of it is not? But even if you get a lot of information, what really can turn into knowledge and wisdom? Have a lot of people will say hey you know tell me about a stock or something. I'll say well tell me about it. And they'll do something like they'll give me the P/E ratio. And I'll say well what does that P/E ratio mean to you? You know and then they'll kind of look at me like I'm not too bright. You know well they'll tell me that a P/E ratio is the price of stock divided by the earnings per share. And I'm like yes I understand what a P/E ratio is. I'm asking you-you just told me that P/E ratio was 26-I'm asking you what does that mean to you? They quickly realize that maybe they don't know some of these things and they stop talking to me. But you have to be able to have the skills to convert information into wisdom. And we don't always have that, and therefore we have an illusion of knowledge.

[On Screen]

Illusions

- Illusion of knowledge
  - The illusion that more information creates more knowledge and better predictions
    - Does telling you the results of the last 5 flips of a coin help you predict what the next flip will be?
    - The internet is full of information
      - ❖ How much is true?

❖ Can you turn this info into <u>wisdom</u>?

[John Nofsinger]: So lastly is illusion of control. It's very interesting that somehow in the back of our mind we get this belief-it's not like a strong belief we wouldn't admit it in public. But it's this belief that we have some sort of influence over the control of the events that are uncontrollable. Right I mean sports. Do we need to wear the same shirt every time we watch our team? And if we stop wearing the shirt, the teams gonna lose or something silly like that. But these illusions do exist, and they can cause investors to be to participate a lot in the trading to eventually have lower returns because we have this illusion that by buying and selling a lot, we are participating in the control of that stock price. And we can actually see this illusion of control in various experiments. I don't know if many of you know the game of craps. But it's throwing dice and you can-sometimes you need certain numbers. And so investors have examined the craps players and they throw the dice harder when they want higher numbers on the dice. And softer when they want lower numbers. K well obviously that doesn't have any kind of effect. But they're you know-that's an example of trying to control what's going on in an uncontrollable event. Tossing a coin. Interestingly enough, more people you know-you could toss a coin, catch it, and flip it over onto your wrist. And you could say anybody want to bet me five dollars on a heads or tails? Or you could keep the coin on your thumb before it's been flipped, and say hey anybody want to bet me you know five dollars heads or tails? Interesting, more people are willing to bet when the coin has not been flipped yet when it's still on the thumb. I don't know if they you know think that somehow they're gonna be able to affect the flipping of the coin in the air or something. But that's the way we act. People choose their own lottery numbers every time rather than just doing them randomly, which is easier. Obviously the numbers you choose aren't any likelier to win than randomly picking ones. But we think that picking the numbers gives us a better chance to win, which is of course doesn't. Okay so this wraps up the overconfidence and the video two for the psychology of investing.

[On Screen]

Illusion of Control

People often believe that they have influence over the outcome of uncontrollable events.

- Craps players throw harder when they want higher numbers and softer for lower numbers
- People are more likely to bet on the toss of a coin before it is flipped
- People choose their own lottery numbers, thinking they can pick the winners

These illusions may cause investors to trade too much and eventually experience lower returns!