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Greed And Fear

"Buy when others are fearful and sell when others are greedy".

"Greed soon becomes one's graveyard".

"Stock markets fluctuate according to the investors' greed and fear".

Newspapers and media scream about the greed in the markets when the stock markets are in a bull phase and they talk about fear when the markets are falling. We all have heard about this greed and fear but it is important to understand as to how these emotions impact our thinking and make us act in ways that are against our financial interests. How do we make decisions when faced with risk? How do fear of losses and greed of gains impact our decision-making? This is best captured in the Prospect Theory written by Daniel Kahneman and Amos Tversky. [1] It is one of the pillars upon which the whole of behavioral economics rests. A brief understanding of the Prospect Theory will enable us to understand our strong emotions of fear and greed.

As far as our feeling towards our losses are concerned we suffer from two behavioral anomalies. One is **Loss Aversion** that is our reluctance and fear of making a loss and the other is **Sunk Cost Fallacy** that is our inability to forget money that is already spent.

As far as our feelings toward gains are concerned we suffer from **Status Quo bias** that is our inability to make decisions and the **Endowment Effect**, which is the tendency to fall in love with what we own and thus makes us resist change.

Loss Aversion

"I want to play it safe. I don't want my capital wiped away. I would rather invest my money in fixed income securities." Says a client Ramesh in 2002.

"Stock markets are not for me especially when I know how people got wiped out in the tech boom. I got a family to support. I am happy earning 6% in a bank deposit. At least I know my money is safe." Mr. Gandhi's comment in 2001.

"I had bought Visual Soft at Rs.3000. I saw a high of Rs.9500. Now it is Rs.400. I will hold on to it. I am a long term investor." Sudhir the trader's adamant attitude in 2001.

"I participated in the tech sector boom. I booked my profits in Infosys and Wipro early, however I am still holding Pentafour, Satyam, Global and Aftek. I could not sell because after I bought they never went up above my cost price." Mrs. Arora brooding over her inability to book losses.

"I had 30% of my portfolio in the technology stocks. When the tech stocks started going down I slowly started increasing my commitment and today it is 100%. I know over a period of time I will recover my losses. The stocks are bound to rebound." Mr. Kanan a very knowledgeable investor doubling his bets."

The above statements are just a sample of how people react in the stock markets. Maybe a few of the above comments could be from you. Surprised? You also have been thinking and acting on the same lines. Well not for long. You will soon see a change in thinking as you read on.

What would you do in the following two scenarios?

<u>Scenario 1</u>

You are given Rs.1000 and the following two options:

A. Guaranteed win of Rs.500.

B. Flip of a coin. If its heads you get Rs.1000 and if it is tails you get nothing.

Which option will you choose?

<u>Scenario 2</u>

Now here you are given Rs.2000 and the following two options:

A. Guaranteed loss of Rs.500.

B. Flip of a coin. If its tails you lose Rs.1000 and if it is heads you lose nothing.

Which option will you choose?

Research suggests that more than likely you chose option A in Scenario1. Why? Because there was a guaranteed win of Rs.500. You acted more conservative and took the opportunity to lock in sure profits.

But you would mostly choose option B in Scenario 2. Why? You did not want to be confronted with a guaranteed loss of Rs.500.Hence you were willing to take more risk if it meant avoiding losses. It is this bias which makes the gamblers so popular with the casinos.

Why would most of us do this? Confronted with a sure profit we become conservative and when confronted with a loss we tend to take more risks. The pain of a loss is three times more than the pleasure of an equal amount of gain. Over time pain becomes terrifying and pleasure becomes boring. Any doubt on this? Say you get an electric shock while using your TV. You will be very scared and avoid going near the TV till the fault is set right. Contrast this with the pleasure you get when you buy a car first time in your life say a Maruti 800. You are soon bored with it and you long for a better and a bigger car and you buy an Esteem. It never stops and your desires go on upgrading. Because pleasure over time becomes boring.

We see losses and profits in isolation and that is the reason; we are more prone to suffer from loss aversion. Thus when we are looking at our portfolios we should not look at different stocks or different class of assets in isolation but look at the portfolio as a whole. Suppose there is a decline of 10% in equities and a rise of 8% in bonds, the overall effect is only 2%. In the above scenarios if one were looking at the final financial position after the exercising of the options, the automatic choice would fall on option A in both the scenarios as it would leave us with Rs.1500.

Take the case of a portfolio having 10 stocks each valued at Rs1 lac. If two stocks depreciate by 50% the effect on the overall portfolio is only 10%. But if one were looking at the stocks in isolation one could be struck by loss aversion when one sees two stocks losing 50% in value. It's a big shock. One could make decisions, which one could repent later.

How does Loss Aversion impact Investor behavior?

A. **Investors tend to prefer fixed income investments to stocks.** Witness the period after the bursting of the dot com bubble till the beginning of

2003. Everyone was so fearful of loosing that they preferred to stay invested in fixed income securities. They would shun equities although that was the best time to invest due to attractive valuations and good dividend yields. The recent pain of investors loosing fortunes in the technology stocks was so vivid and true that investors were not willing to risk anything in the stock markets. The emotion of fear was very strong leading to loss aversion. Actually the right time to invest is when others are fearful.

B. **Investors tend to take their profits very early.** If one has to be successful in the stock markets it is important to ride the winners and discard the losers. However with loss aversion you tend to be ultra conservative and thus book profits very early. We all suffer from loss aversion and that is the reason we find that our winners get small amount of profits and our losers pile us up with huge losses. Winning streaks tend to be short lived.

C. Investors take more risk when threatened with a loss. Investors tend to lose their balance of mind when confronted with a loss and they become more daring and venturesome. This is not because of the courage factor but because of madness caused by the pain of a loss. One of our clients comes one day and buys ten low valued stocks all quoting below par. When I questioned him about the wisdom of putting his hard earned money in such stocks, he replied "If just a couple of them would turn out to be multi baggers I would make good money". He strongly believed in his strategy and for about a couple of years he had no success. But his portfolio had over a hundred of such junk stocks with the hope that one day he would make it big. He had staked his full capital in such junk stocks. Since he was losing in his strategy he went on taking bigger risks by increasing his exposure.

D. **Investors have a tendency to hold on to losers and sell winners.** A portfolio of stocks with a few winners at the top followed by a long list of losers. Is that not similar to your own portfolio? We come across such portfolios regularly. Most of them are also the same. Why do investors have such portfolios? As discussed earlier it is because of our tendency to go for sure gains and take more risk when threatened with a loss. So if you have one such portfolio you need to know that loss aversion is controlling your decision-making. Instead of riding the winners loss aversion is making you ride the losers.

E. **Tax Aversion.** People are always wary of paying taxes. This is also one sort of loss aversion. Tax is an outflow and is considered as a loss. But in reality we pay tax on our income. It needs a change of mind set. Always count your income net of taxes. This will enable you to avoid tax aversion arising out of loss aversion.

Going back to our examples understand how each one was behaving due to loss aversion. Ramesh and Mr. Gandhi were so loss averse that they were fleeing to safety by opting for fixed income securities and bank deposits. Off course if one takes in to account the ravages of inflation then both of them had opted for a guaranteed losing proposition. Return of around 6% as against a government reported inflation of around 8%. Sudhir's loss aversions made him hold on to the looser under the guise of a long-term investor. Mrs. Arora's loss aversions made her sell the winners to early and she was so loss averse that she could not sell the stocks where she was making losses. Thus when she had to ride the winners and sell the losers she did exactly the opposite. Mr. Kanan's loss aversion saw him taking bigger and bigger risks and had 100% of his portfolio in tech stocks. Nothing wrong with being in tech stocks but in this case his loss aversion drove him to take such risks. He put aside the asset allocation theory of diversification and with such a portfolio his chances of being further loss averse increase a lot.

An over sensitivity to loss can also have negative consequences. One of the most obvious and important areas in which loss aversion skews judgment is in investing. In the short term, investors being especially sensitive to losses contribute to the panic selling that accompanies stock market crashes. This is what happened in May 2004 when the markets tumbled and the BSE sensex was down by over 700 points in just two trading sessions. . The pain of the losses made investors over react, as the injured wanted to cut their losses. This precipitated the fall steeply. However the problem was that all the investors who had exited the stocks felt a different kind of pain when only a couple of days later the stock market started rising. By pulling out of the stock markets in reaction to short term drops you run the greater risk of missing out on the more productive and profitable days.

Among the emotions that determine the individual investor's perception of risk is an aversion to losses. The idea that investors are not risk averse but loss averse is one of the main tenets of behavioral finance. While the distinction might seem trivial, studies have shown that investors will increase their risk, defined in terms of uncertainty, to avoid the smallest probability of loss. It is not so much that people hate uncertainty, but rather they hate losing.

Sunk Cost Fallacy

1. Investor: I am sure I have made the right investment in Sterlite Optic. It is a great stock. I have read about the telecom boom and this is the right stock to be in.

Broker: I agree but the telecom craze has ended, there is overcapacity and the story is over. The stock is going down as the industry fundamentals have changed.

Investor: So what, I will buy more and bring down my cost of purchase. I know it was a great stock. Please buy 2000 Sterlite Optic.

2.Housewife: I thought Investing is fun so I enrolled myself for these Investment classes. I think I have made a mistake as I feel I am not cut out for this. But what can I do? I will finish them as I have already paid the fees and they don't have a refund policy.

3. Student: I am not interested in Commerce. It's a pain; I made a big mistake and got carried away in to commerce just to be with my friends. Now since I have already completed three years, I would rather complete the rest and take the degree.

4.Businessman: In last two years I have spent so much money repairing my car. I would have been better of buying a new one.

5.Teenager: Oh, what a boring book I have bought. With great difficulty I read the first 30 pages. Well I still have to complete 400 more pages. I hope I do that by the end of this week and get away with it. I know I should not have wasted my money on such a book.

6. Day Trader: I am really finding it tough to make money in such volatile markets. I should not have got this terminal at home. It's a fixed expense every month. I will have to trade everyday so that I can at least recover my fixed costs.

Why do people do what they do not like? Is it not simple to say," I choose not to do it."

Ok. Now what would you do in the following two scenarios?

You have complementary tickets for a Filmfare Awards night On the evening of the program there is a severe rainstorm and the traffic is disrupted due to floods You have to travel from Colaba to Andheri Would you go? Yes or No

You have bought a ticket for a Filmfare Awards night for Rs.1500 On the evening of the program there is a severe rainstorm and the traffic is disrupted due to floods You have to travel from Colaba to Andheri Would you go? Yes or No

Most would agree to go for the show if they had paid for the tickets and avoid if they have received the same as complimentary. Actually this distinction makes no sense as the money for the ticket is spent or sunk, in either case you would not get it back whether you go to the event or not. What one must really see is the additional risk one is taking by braving the storm and the additional cost one may incur i.e. one may die or get injured, the car could get severely damaged or one may fall sick. So the danger posed by the rainstorm should carry equal significance for people who receive the tickets for free or pay for it.

This particular type of loss aversion to which we all are prone to is what Richard Thaler described as the "Sunk Cost Fallacy". You increase your commitment to justify your past actions as your ego gets tied to the commitment.

Lets go back to the above episodes. The investor wants to buy more because he already has the stock. It was his decision and he does not like to accept the fact that his decision has gone wrong. So to justify he buys more and has solace that he is bring down his cost of purchase. The housewife will go through the ordeal because she has already got enrolled. She will not consider the extra time and energy and the money by way of transportation she will spend to go through fulfilling the original wrong decision.The student completes the graduation because he has already completed three years. Would he really learn from something he is not interested in? The businessman should have understood that there is something like an economic life of a car. Rather he chose to go on spending on repairs as every time a new expense came he thought of the previous repair and he thus went on and on. The teenager has already spent on the book and so he will finish it howsoever boring and time consuming. The day trader does a business, which he is not sure to succeed in but since he already has the fixed expenses he will do something, which he is sure going to harm him.

Each of them had a choice. To do or not to do. However each went ahead doing because each one wanted to justify their previous action. Moreover they did not want to appear as being wasteful and incompetent in their financial decisions.

Next time you buy a mobile phone notice how the salesman offers to sell you a sleek leather pouch to protect your costly instrument, the extra portable charger so you can use it in your car, the sleek earphones. All these accessories are bought not because you really need them but when you are making a big investment in the mobile phone you justify these expenses as necessities for your original decision.

The same happens when you go and buy a car. At that time you are more prone to buy accessories. However if you wait for a couple of days after you have bought the car, I am sure you will not go and buy those accessories. There are a number of such examples as to how we fall prey to the sunk cost fallacy in our day-to-day lives. This not only affects us in Investing but also in all our spending.

Lets take the case of our banking industry and the state of our Financial Institutions. Why are they saddled with huge NPA's? They lend money to businesses. The borrower's business runs in to trouble. The borrower goes to the bank and asks for more money. The bank lends him more money because he is an old client and the bank has already lent him the money. The bank should find out whether the business is viable to require more funding and then lend additional money. But because of the sunk cost fallacy banks go on lending to bad businesses because they happen to be past borrowers. Thus good money goes after bad money.

Sunk cost fallacy can also help us in a positive way. One decides to go on a health spree with a vow to have regular workouts at the gym. Instead of paying daily charges if one were to take a yearly membership the sunk cost fallacy helps one to be regular, as one has already expended the yearly fees. This serves as a motivation to keep on going.

Sunk Cost Fallacy and its impact on Investors and Spenders

1. Averaging cost of purchase: Most of the time when investors go wrong in their purchase of stock they go on buying more at every fall only to justify their past action of buying. They do this so that they can bring down the cost of their purchase. There is nothing wrong in doing so, provided you are confident that you are buying more of the stock, as it is a great value. You are prone to sunk cost fallacy if you are buying only to justify your past action because your ego has got tied to your original commitment.
2. Spending on repairs: Two years back you painted your old car. Then last year you replaced the tyres and changed your suspension. This year the mechanic informs you that the engine needs an overhaul. Every year you go on spending on the car because you spent something the previous year. You go on justifying more spending when actually you need to discard the car as it has reached its economic life. Maybe it is wiser to buy a new car. Spending on repairs is a common sunk cost fallacy with most of us.
3. Government spending on unviable projects: Bureaucratic delays have delayed the project and the same has become unviable in present conditions. But a lot of steel and cement have already reached the sight and the plans are ready. The initial fees of the engineers have been paid.

With so much money already spent the project needs to be completed even though it has become unviable. This is how sunk cost fallacy works with governments.

Sunk Cost Fallacy is very evident in our day-to-day lives. How many times have we sat through a boring movie just because we had bought the tickets? How many times have we finished a bad book just because we had read a few pages and bought the book? There was this friend of mine who had a natural ability to sell. He would have had a very promising career in marketing, however his father wanted him to be a chartered accountant. He did his CA and today he is an accountant, a profession he despises. He cannot do anything as he is sunk with his CA qualification, which got him in to the accounting profession.

You go to a buffet lunch. Why do they have so many dishes? The idea is to satisfy the palates of all the people who are participating in the lunch. If you don't like something then there is another choice. But we behave very differently when we go for a buffet lunch. We try to taste practically every thing that is kept on the table and tend to over eat. Sunk cost fallacy is working on you. Next time you go for a buffet, be aware that your health is more important than the indulgence.

We have understood the two behavioral anomalies of loss aversion and sunk cost fallacy. It does not end with this knowledge. Now the interesting part is how can we understand ourselves and identify our anomalies. Once that is done how do we improve upon ourselves to be better investors.

Are you a victim of Loss Aversion and Sunk Cost Fallacy?

You may be if

1. You prefer fixed income securities over stocks.
2. You are tempted to move out of the markets when prices fall.
3. Your portfolio consists of a few winners followed by a long list of losers.
4. You sell your winners fast and hold on to losers.
5. You make important spending decisions based on your past spending.

If one is a victim of Loss Aversion and Sunk Cost Fallacy **what does one do about it?** The following are several suggestions that should enable one to make wiser investment decisions. They have helped many to become wiser investors and I am sure they will do the same to you.

1. What is your appetite for loss? : Start with the assumption that you are probably more sensitive to losing money than you actually think. If you operate under this assumption you are more likely to avoid making decisions that will get you in to trouble when you realize later on that you exposed yourself to more risk than you were willing to or able to deal with properly. Due to the overconfidence bias some people are not keen to admit that they are prone to any of the psychological traps we will discuss

in this book especially those who pride themselves on their investing acumen. Just because you have had success in investing does not mean you are rational and a smart investor. However such people think that they are smart.

Why is it important to assess your level of loss aversion or why should you evaluate your tolerance for risk. As mentioned earlier loss aversion can have two different effects and so you need to ask two different types of questions. The first effect is your ability to take on the pangs, which come with the stock market volatility. So the first question lets you know whether you will exit the stock market at the first sign of trouble? Ask yourself if the market drops by 20% tomorrow will I be tempted to take my money out and invest in bonds? If the answer is "Yes" then your loss aversion is high and you are not prepared for the ups and downs of the market.

The second effect of loss aversion is to hold on to the losers and sell the winners. Consider the following situation and and give your solution. You own Rs.50000 worth of Wipro stock, which you bought for Rs.25000, and Rs 50000 worth of TELCO stock, which you had bought for Rs.100000. Now you need Rs.50000 urgently. What stock would you sell?

If you choose to sell Wipro then like most of us you have loss aversion, which makes you sell the winners and hold on to the losers. Off course the best strategy under such circumstances should be to sell half of each and avoid paying taxes.

2. Diversify within assets and across assets: The best way to avoid the pain of losing is to avoid losing money. I hope we had an answer for that but definitely there are ways to minimize the losses. One needs to not only diversify within asset classes but also across different assets. A portfolio of equity stocks need also to be well diversified by limiting an individual stock exposure to say10% and an industry exposure to say 20%. Similarly all the wealth may not be put in one asset class only, it could be distributed between stocks, bonds, real estate, gold, mutual funds etc. The behavioral economic idea behind diversification is that a loss in one of your asset is likely to be offset with a gain in another asset. So you will be less likely to react emotionally and do something foolish on impulse. At the same time you take a hit you are also experiencing gain in other part of the portfolio. Again as discussed earlier having an overall view of your portfolio helps you to avoid loss aversion traps.
3. Total Portfolio Vision: One must avoid looking at gains and losses in isolation. One must train oneself to look at individual investments as a part of the overall portfolio. It requires discipline and one would do well to always have such information reports on a spreadsheet so that one is always having the big picture. Secondly it is important that one has a concrete investment philosophy and a strategy in place. One needs to put the Investment Plan down on paper. For example, have an asset allocation approach. Determine the portion of the portfolio one needs to

invest in stocks, bonds, real estate etc. Write down the goals and the purpose the investment allocation is made. Write down the rationale behind each investment particularly if it is stocks. Writing down increases your commitment to follow the course and not stray away midway. In fact it is a way of using sunk cost fallacy to your advantage because you are committing yourself to the plan and will stick by it. When you follow such discipline of identifying your goals and justifying all your investments in the context of achieving those goals you will be less likely to react to the ups and downs of the markets.

4. Let bygones be bygones, start afresh: Very often our decisions of the future are weighed down by our actions of the past. As discussed earlier the sunk cost fallacy makes us do certain things, which may not be in our best interest. So what does one do? The best way is to forget the past but it is easier said than done. But if you are able to incorporate the notion that "let bygones be bygones" in to your financial decisions you will be that much better off for trying. For example you are debating the sale of an investment. Your goal is maximization of wealth. The goal is not to justify your decision when you bought. What is important is what is the investment worth today? You need to evaluate the investment based on the current potential for future gain or future loss. So how does one go about forgetting the past? One helpful device is reframing decisions to remove emotional investments. Assume that you can reverse history and start anew. You are holding 1000 shares of Sterlite Optic bought at

Rs.400 a share. The current price is Rs.55. You are under loss aversion and sunk cost fallacy. Ask yourself: Would I like to buy Sterlite Optic at the current price? If your answer is “No”, it is time for you to sell your holding. If it is “Yes” and you believe that the lower price is a bargain, hold on and even buy more.

5. Reframe losses as gains: One needs to evaluate one’s investments individually with an eye on one’s financial situation. However once you have done so it becomes difficult to take action especially when you are making a loss. One way to do is looking at the positive side. If you are making a loss you will be able to adjust the same against your gains. It is tax deductible. By viewing your potential loss as a gain (gain being the lower amount of taxes you will pay) you master your own mental tendencies.
6. Segregate gains and integrate losses: To stretch your enjoyment from good things in life you should stretch gains whenever possible. Imagine the joy having a gift of Rs.15000 one week and another Rs.10000 next week rather than having a single gift of Rs.25000.Offcourse you cannot plan your gifts but you could plan some of life’s windfalls and space them out. By the same logic you could be better off if you integrate losses. Since pain becomes terrifying over time it is good to have it in one shot. When you visit the dentist and have many cavities to be filled do it so in one sitting. Don’t subject yourself to multiple traumas. Similarly when you have to pay your taxes pay them in one go rather than in installments.

Weber's law implies that the pain of two moderately bad experiences will typically exceed the pain of experiencing both at one time. Use Weber's law to your advantage.

7. Pay less attention to your Investments. Now how can one be suggesting something like this when the market volatility is increasing day in and day out? The point I wish to make is that the more frequently you check your investments the more you will feel the urge to react to the ups and downs that are an inevitable part of the markets. For investors who do not trade professionally a six monthly review of a portfolio is frequent enough to make necessary adjustments in asset allocation. Yes you might miss a market dip or a rise but I would always trade it for my financial peace of mind.

Fear and Greed are two sides of the same coin. We have seen how fear affects us when we are faced with losses. Now lets go to the next chapter to understand our behavior when we are confronted with gains and greed drives us.

1.Prospect Theory: An analysis of Decisions under risk by Daniel Kahneman and Amos Tversky published in March 1979 in Econometrica.