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## *Fear and the Perception of Risk*

*“The real key to make money in stocks is not to get scared out of them”*

*– Peter Lynch*

On the morning of September 11, 2001, the United States suffered the deadliest terrorist attack in human history. In a series of coordinated attacks, 19 Al-Qaeda terrorists hijacked 4 passenger planes: 2 crashed into the North and the South Tower of the World Trade Centre respectively; 1 crashed into the Pentagon building in Arlington County, Virginia; and the fourth crashed into a field in Stonycreek Township, Pennsylvania (after passengers thwarted the hijackers). The total fatalities included 246 passengers in the airplanes (including air crew) and about 2600 people in the towers and the surrounding areas (including the emergency workers). The attacks and the actions that followed had important economic and political implications in the coming years. One of the adverse economic impacts was on the airline industry. The fear of the terror attacks led to many Americans avoiding air travel for quite some time. However, the traffic on the roads went up significantly.

Gerd Gigerenzer, a German psychologist, studied the impact of this change in preference from flying to driving long distances. He observed that the sharp increase in road travel in the months immediately following the 9/11 attacks resulted in a substantial increase in fatal traffic accidents. “All in all, an estimated sixteen hundred Americans lost their lives on the road due to their decision to avoid the risk of flying”. The death toll was six times the number of passengers who died in the four fatal flights! Two other researchers, Michael Sivak and Michael Flannagan, highlighted the same phenomenon showing that flying would have been safer than driving. They opined, “We don't



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want to minimize the tragedy of Sept. 11. We are just making the point that from the perspective of personal safety, domestic flying on major airlines is still far safer than driving. There's a disconnection between the popular perception of risk and what the data really indicate''.

## **FEAR AND RISK**

Fear is a very powerful emotion which alerts us to the presence of danger or harm. It triggers a reflexive response and helps us survive. But we are not completely rational in the way we evaluate danger or risks. There are times when we are scared of things we shouldn't be; and also, times when we are unafraid of risks that can cause serious harm. This has an impact on our investment decisions too.

Evaluation of risk has two components: a) the value of negative outcome or harm or loss and b) the probability of its occurrence. In a perfect world, both components will be clearly defined, and individuals would combine the two and take decisions without interference of any emotion.

$$\text{Risk} = \text{Value of negative outcome} \times \text{Probability of its occurrence}$$

However, it is seldom so straight forward. Our emotions invariably creep into both components of the equation. How one 'feels' about a risk of a financial loss of Rs. 100,000 may depend on a plethora of issues depending on our memories, experience and imagination. The value of the same financial amount may vary from person to person, situation to situation and time to time. Similarly, exact probability calculations of different outcomes may not be available due to uncertainty. Where probability distributions are not readily available, people use their own judgement (subjective probabilities) about the same. These subjective probabilities are based on strength of beliefs rather than relative frequencies of occurrence. Simply put, individuals rely on what they 'feel' about the risk rather than what they calculate.

People may also ignore probability data altogether. As in the case of the 9/11 example, no probability data telling you that it is safe to fly, may be acceptable to the mind under those circumstances. In the equity markets, investors may decide to stay away from stocks after



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experiencing a crash. As long as those memories are vivid in the mind, investors may ignore the historic data about long term healthy stock market returns. Jason Zweig, in his book, “Your Money and Your Brain” discusses that people often overestimate the risks of a sharp crash in the equity markets and underestimate the impact of inflation on their savings. “The real risk is not that the stock market will melt down, but that inflation will raise your cost of living and erode your savings”, he says.

Our decisions are more often based on our perception of risk rather than objective calculation of risk.

### **WHAT AFFECTS OUR PERCEPTION?**

Our perception of risk is affected by a number of factors. Behavioral scientists have highlighted the following to be some of the common influences that impact our perception regarding risk:

**Availability Heuristic:** The most powerful impact on our risk perception comes from the availability heuristics. It is our tendency to rely on information that comes quickly and easily to our mind when making a decision. This leads to mistakes in decision making because what we easily recall may not be the most common occurrence but a vivid and rare occurrence. Hence, we overestimate rare risk events (become unduly scared) and underestimate the common risks. The media also plays a role in our availability bias. Market moves that get highlighted and repeated continuously in the media make a strong impression on our mind. Scams and corporate frauds, for example, may feel more likely occurrences because they are highlighted repeatedly with high pitched voices. The data may actually tell a different story.

**Degree of perceived control:** When we believe we have more control, we perceive the activity to be less risky or expect a higher chance of being right and hence fear less. Gaining more knowledge about the decision and making our own choices gives us a sense of control and confidence. However, we also suffer from having an illusion of control over outcomes which may be random. We often become overconfident about our decisions and underestimate risks which need our serious



*The idea is to first relax your mind so you are not acting on your reflexive self and giving time to your reflective self to take control*

considerations. Ultimately, when those risks show up, we panic as we are completely unprepared.

***Familiarity of risk situation:*** Investors tend to be more tolerant of risks when the situation and investments are familiar. Familiarity provides us comfort and unknown makes us anxious. Hence investors are more willing to take risks on investments which have made them profits in the past and hesitate to accept a new idea. Consequently, they tend to underestimate the risks of the familiar and overestimate the risks of the new.

***Desire for certainty/Ambiguity avoidance:*** While we prefer simplicity and certainty, in the stock markets, we have to deal with complexity and uncertainty. It requires conscious effort to differentiate between risk and uncertainty and even think in probabilities. It is not surprising then, in our endeavour to reduce our worries, we tend to overpay for what looks like 'defensive' investments: which give us a sense of certainty or lower volatility. We overpay for avoiding risk and end up settling for lower (and often negative) returns.

***Comfort of crowd:*** Our risk perception is also altered by the behavior of the crowd. Being with the crowd provides us comfort. We tend to consider the popular choice to be less risky. Being contrarian on the other hand, tests our convictions continuously. History has repeatedly proven that crowds are driven by narratives and hence may often misprice risks. Going with the crowd will mean you join them in panics too.

## **WHAT CAN WE DO ABOUT IT?**

Let's split this into two parts: a) short term actions: when you are in midst of a situation b) long term actions: to prepare for such situations in the future.

### **A) Short term actions:**

- The most important thing to do when one is fearful and anxious is to 'step back'. Take a break. Go for a walk. Talk to someone who is calm. The idea is to first relax your mind so



*You can try to put roadblocks in the decision-making path that stop you from taking decisions when overrun by fear*

*you are not acting on your reflexive self and giving time to your reflective self to take control.*

- *Before the next decision is taken, one needs to review the information and go through the investment process again. Understand the situation. Check the investment journal/decision recording/investment case. Do the scenario analysis and consider the payoffs and probabilities.*
- *Avoid the noise. Stay away from the crowd. Do connect with the experienced and sane voices in your network.*

#### **B) Long term actions:**

*Fear has a strong effect on the body and the mind. It generates quick responses within us that help us when we are in danger. In investment decision making however, fear can lead us to mistakes. You cannot avoid this emotion, however you can try to put roadblocks in the decision-making path that stops you from taking decisions when overrun by fear. A good investment process can 'nudge' you to check your emotions and also put 'pre-commitments' to stop you from acting emotionally.*



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#### **ABOUT STOIC INVESTOR:**

The word “Stoic” is used to describe someone who remains calm under pressure and avoids emotional extremes. For the purpose of this newsletter we refer to the “Stoic investor” as an investor who is realist (avoiding extreme optimism and extreme pessimism), resilient (withstand difficult conditions) and rational (who acts with logic and reason).

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