

Behavioral Finance problems
CURED
by
Enterprise Risk Management

Behavioral Finance

- Primary Observation:

People are not
Rational Economic Beings!

News FLASH

EMOTIONS
impact Human Decision
Making!

Behavioral Finance

- Second Observation:

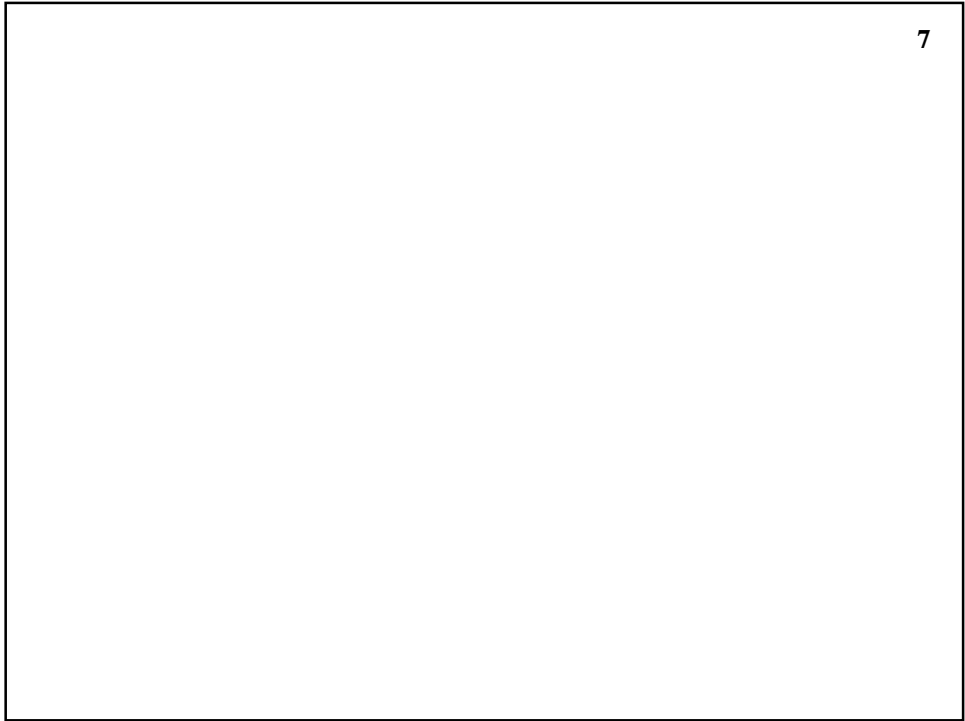
For Financial Decisions,
Certain Patterns can be observed.

Behavioral Finance Patterns

- Anchoring – Initial estimates impact final calculations
- Prospect Theory – Higher aversions to losses
- Overconfidence- higher weight given to local knowledge
- Hindsight Bias – memory of misestimation fades
- Confirmation Bias – exaggeration of correlating information, ignoring contra facts
- Mental Accounting – arbitrary grouping of gains and losses
- Status Quo Bias – preference for things as they are now
- Endowment Effect – Higher value placed on current assets

ERM Solutions

- | | |
|--|--|
| • Identify ALL Risks | • Using Quantitative Methods Rather than Qualitative methods for risk evaluation. |
| • Quantify ALL Risks | • Using Comparable methods for all risks |
| • Track ALL Risks | • Measurement of Risk Adjusted Financial Results (RAROC). |
| • Control, Transfer, Mitigate ALL Risks | • Risk Limits and Risk Control Processes |
| • Norming new information to past situations. | • Identify Risks in Advance. |
| • Back Testing and Calibration of Models | • New Product Approval Process |
| • Regular Outside Perspective | • Stress Testing |
| • Separation of Duties | |
| • Risk Reward Trade-Offs | |



Behavioral Finance Observation

- 1. People Have a Predisposition to Work on the Problems They Feel They Can Solve, and Avoid the Ones They Feel They Cannot Solve***

ERM Solution

- A. Identify ALL Risks**
- B. Quantify ALL Risks**
- C. Track ALL Risks**
- D. Control, Transfer, Mitigate ALL Risks**

Making Sure that you address ALL Risks

1. Start from Standard Lists (Avoid Group Think)
 - AAA Risk Map
 - COSO Risks
2. Ask broadly about risks (Within Company)
3. Attend Risk Management Conferences
4. Read Broadly
 - Not just your industry

Behavioral Finance Observations

ERM Solution

2. People Tend to Respond Too Conservatively/Optimistically to New Information. In the Extreme, This Results in Ballistic Behavior

1. Norming new information to past situations.
2. Back Testing and Calibration of Models

Risk Management

Norming New information to Past Situations

- Fitting a new proposal into the range of risk & reward for existing programs

Back Testing and Calibration of Models

- Immediately recognize and correct optimism/pessimism

Behavioral Finance Observations

3. *People Generally Believe the Law of Large Numbers Applies to Small Samples, Therefore They Often Predict Reversal Within a Small Sample*

ERM Solution

1. Using Quantitative Methods Rather than Qualitative methods for risk evaluation.
2. Using Comparable methods for all risks

Risk Management

Quantitative Methods

- Measure All Risks

Comparable Methods

- Consistent Models
- Consistent Assumptions
- Consistent risk metrics
- Consistent definition of “loss”

Behavioral Finance Observations

ERM Solution

4. People Tend to Not Admit Ignorance or Mistaken Assumptions

Back testing and
Calibration
of Models

Behavioral Finance Observations

ERM Solution

5. People Are Inclined to Be Risk Averse Once They Have Made a Gain, but Can Be Risk Seeking (i.e., Doubling Down) When They Have Made a Loss

1. Measurement of Risk Adjusted Financial Results (RAROC).
2. Risk Limits and Risk Control Processes

Risk Management

RAROC

- Period by period reflection of return for risk
 - no credit for prior gains

Risk Limits & Controls

- Prevent losers from “Doubling Down” to recover losses

Behavioral Finance Observations

- 6. **People Have a Tendency to Overlook Other Perspectives**
- 7. **People Do Not Realize When They Are at an Information Disadvantage**
- 8. **People Often Place Greater Confidence In Their Independent Estimate of Value Than in the Collective Wisdom of the Market**

ERM Solution

Regular Outside Perspective

- **Industry Sources**
- **Reinsurers**
- **Internal Peer Review & Information sharing**
- **Get Outsiders to Do Objective Assessments of Businesses and Products**

Behavioral Finance Observation

- 9. **People Have a Strong Tendency to Adopt Conspiracy Theories, and Blame Others for Poor Results**

ERM Solution

1. **Identify Risks in Advance.**
2. **New Product Approval Process**

Risk Management

Identify Risks in Advance

- First step in Risk Management
- Losses from risks are either
 - (a) within expected range
 - (b) outside expected range due to:
 - inadequate risk management
 - Inadequate understanding of risk

New Product Approval Process

- Identify risks
- Propose risk management strategy
- For retained risks
 - identify measurements
 - Identify controls

Behavioral Finance Observation

10. People Frequently Exhibit the “Endowment Effect,” Whereby They Place an Extra Value on Things They Already Own

ERM Solution

1. Using Quantitative Methods Rather than Qualitative methods for risk evaluation.
2. Using Comparable methods for all risks

Speaking of Outside Perspective...

Reasons Civilizations Fail from Jared Diamond

Author of "Guns, Germs & Steel"

1. Failure to anticipate a problem before it arrives
2. Failure to see a problem once it arrives
3. Failure to even try to solve a problem once they have perceived it
4. Failure to solve a problem that they are trying to solve.

http://www.edge.org/3rd_culture/diamond03/diamond_index.html

How Does ERM Address?

1. Failure to anticipate a problem before it arrives

ERM Solution

- **Stress Testing**

How Does ERM Address?

2. Failure to see a problem once it arrives

ERM Solution

- **Variance Analysis**
 - *Especially Unexpected Good Results*

How Does ERM Address?

3. Failure to even try to solve a problem once they have perceived it

ERM Solution

- **Separation of Duties**

How Does ERM Address?

4. Failure to solve a problem that they are trying to solve.

ERM Solution

- **Risk Reward trade-offs**

Actuaries and Behavioral Finance

- Actuaries have always been closet behavioralists
 - Assumptions for lapse, withdrawal, deposits, option exercise have always been based on experience rather than pure finance utility models
- Actuaries tend to give advice to company management based on utility theory
 - Look at many management decisions as “illogical”
- Actuaries need to learn to understand behavioral finance tendencies
 - and factor that into our advice and understanding of management decision making

Conclusions

- **Behavioral finance tendencies apply to insurance company management**
- **Risk Management provides systematic practices that can help to overcome the sub-optimal results of behaviors**



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