

# Investor sentiment

Course: Impact of COVID-19 to  
financial markets

PROFESSOR NABIJON HOLOV

*“The investor’s chief problem, and even his worst enemy, is likely to be himself.”*

*— Benjamin Graham*

*“There are three factors that influence the market: Fear, Greed, and Greed.”*

*— Market folklore*

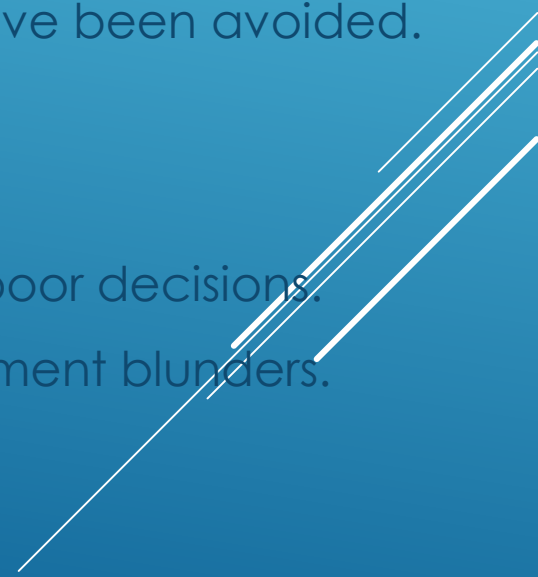
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Psych yourself up and get a good understanding of:

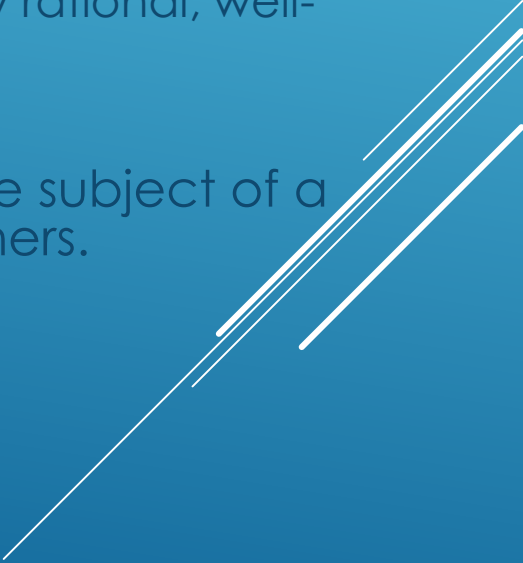
1. Prospect theory.
2. The implications of investor overconfidence and misperceptions of randomness.
3. Sentiment-based risk and limits to arbitrage.
4. The wide array of technical analysis methods used by investors.

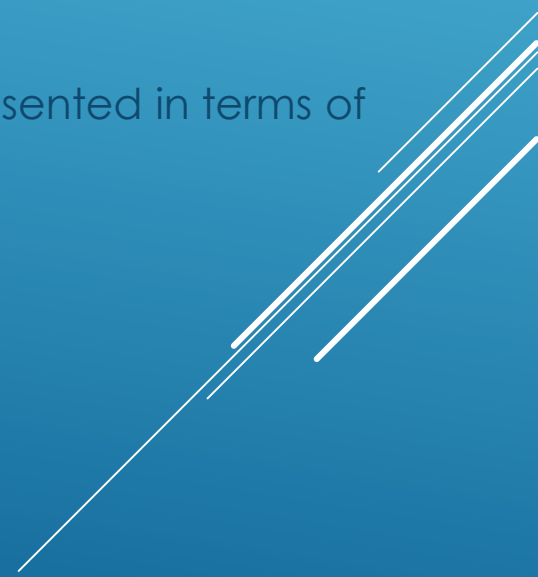
# LEARNING OBJECTIVES




- ▶ Sooner or later, you are going to make an investment decision that winds up costing you a lot of money.
  - ▶ Why is this going to happen?
    - ▶ You made a sound decision, but you are “unlucky.”
    - ▶ You made a bad decision—one that could have been avoided.
  - ▶ The beginning of investment wisdom:
    - ▶ Learn to recognize circumstances leading to poor decisions.
    - ▶ Then, you will reduce the damage from investment blunders.
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- ▶ **Behavioral Finance** The area of research that attempts to understand and explain how reasoning errors influence investor decisions and market prices.
  - ▶ Much of behavioral finance research stems from the research in the area of cognitive psychology.
    - ▶ **Cognitive psychology**: the study of how people (including investors) think, reason, and make decisions.
    - ▶ Reasoning errors are often called cognitive errors.
  - ▶ Some people believe that cognitive (reasoning) errors made by investors will cause market inefficiencies.
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- 1) Investor rationality
  - 2) Independent deviations from rationality
  - 3) Arbitrage
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- ▶ For a market to be **inefficient**, all three conditions must be absent. That is,
    - ▶ it must be that many, many investors make irrational investment decisions, **and**
    - ▶ the collective irrationality of these investors leads to an overly optimistic or pessimistic market situation, **and**
    - ▶ this situation cannot be corrected via arbitrage by rational, well-capitalized investors.
  
  - ▶ Whether these conditions can all be absent is the subject of a raging debate among financial market researchers.
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- ▶ Prospect theory provides an alternative to classical, rational economic decision-making.
  - ▶ The foundation of prospect theory: investors are much more distressed by prospective losses than they are happy about prospective gains.
    - ▶ Researchers have found that a typical investor considers the pain of a \$1 loss to be about **twice** as great as the pleasure received from the gain of \$1.
    - ▶ Also, researchers have found that investors respond in different ways to **identical** situations.
    - ▶ The difference depends on whether the situation is presented in terms of losses or in terms of gains.
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- ▶ There are three major judgment errors consistent with the predictions of prospect theory.
    - ▶ **Frame Dependence**
    - ▶ **Mental Accounting**
    - ▶ **The House Money Effect**
  - ▶ There are other judgment errors that are also consistent with the predictions of prospect theory.
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- ▶ If an investment problem is presented in two different (but really equivalent) ways, investors often make inconsistent choices.
- ▶ That is, how a problem is described, or framed, seems to matter to people.
- ▶ Some people believe that frames are transparent. Are they?
- ▶ Try this: Jot down your answers in the following two scenarios.

FRAME DEPENDENCE, I.



- ▶ **Scenario One.** Suppose we give you \$1,000.

Then, you have the following choice to make:

A. You can receive another \$500 for sure.

B. You can flip a fair coin. If the coin-flip comes up “heads,” you get another \$1,000, but if it comes up “tails,” you get nothing.

- ▶ **Scenario Two.** Suppose we give you \$2,000.

Then, you have the following choice to make:

A. You can lose \$500 for sure.

B. You can flip a fair coin. If the coin-flip comes up “heads,” you lose another \$1,000, but if it comes up “tails,” you lose nothing.

## FRAME DEPENDENCE, II.

- ▶ What were your answers?
- ▶ Did you: choose option A in the first scenario **and** choose option B in the second scenario?
  - ▶ If you did, you are guilty of focusing on gains and losses, and not paying attention to what is important—the impact on your wealth.
  - ▶ However, you are not alone.
    - ▶ About 85 percent of the people who are presented with the first scenario choose option A.
    - ▶ About 70 percent of the people who are presented with the second scenario choose option B.

FRAME DEPENDENCE, III.


- ▶ But, the two scenarios are actually identical.
- ▶ In each scenario:
  - ▶ You end up with \$1,500 for sure if you pick option A.
  - ▶ You end up with a 50-50 chance of either \$1,000 or \$2,000 if you pick option B.
  - ▶ So, you should pick the same option in both scenarios.
- ▶ Which option you prefer is up to you.
- ▶ But, if you are focusing on wealth, you should never pick option A in one scenario and option B in the other.
- ▶ The reason people do is that the phrasing, or framing, of the question causes people to answer the questions differently.


FRAME DEPENDENCE, IV.

- ▶ **Mental Accounting:** Associating a stock with its purchase price.
- ▶ If you are engaging in mental accounting:
  - ▶ You find it is difficult to sell a stock at a price lower than your purchase price.
  - ▶ If you sell a stock at a loss:
    - ▶ It may be hard for you to think that purchasing the stock in the first place was correct.
    - ▶ You may feel this way even if the decision to buy was actually a very good decision.
  - ▶ A further complication of mental accounting is **loss aversion**.
- ▶ **Loss Aversion:** A reluctance to sell investments after they have fallen in value. Also known as the “breakeven” effect or “disposition” effect.
- ▶ If you suffer from Loss Aversion, you will think that if you can just somehow “get even,” you will be able to sell the stock.
- ▶ If you suffer from Loss Aversion, it is sometimes said that you have “get-evenitis.”

## MENTAL ACCOUNTING AND LOSS AVERSION

- ▶ Las Vegas casinos have found that gamblers are far more likely to take big risks with money that they have won from the casino (i.e., “house money”).
  - ▶ Also, casinos have found that gamblers are not as upset about losing house money as they are about losing their own gambling money.
  - ▶ It may seem natural for you to separate your money into two buckets:
    - ▶ Your very precious money earned through hard work, sweat, and sacrifice.
    - ▶ Your less precious windfall money (i.e., house money).
  - ▶ But, this separation is plainly irrational.
    - ▶ Any dollar you have buys the same amount of goods and services.
    - ▶ The buying power is the same for “your money” and for your “house money.”
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- ▶ Let us return to the shares of Fama Enterprises and French Company.
  - ▶ Suppose shares in both were to decline to \$15.
  - ▶ You might feel very differently about the decline depending on which stock you looked at.
    - ▶ With Fama Enterprises, the decline makes a bad situation even worse. Now you are down \$25 per share on your investment.
    - ▶ On the other hand, with French Company, you only “give back” some of your “paper profit.” You are still way ahead.
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- ▶ Thinking this way means that you are guilty of playing with house money.
  - ▶ Whether you lose money from your original investment or lose money from your investment gains is **irrelevant**.
  - ▶ There are two important investment lessons here:
    - ▶ **Lesson One.** There are no “paper profits.” Your profits are yours.
    - ▶ **Lesson Two.** All your money is your money. You should not separate your money into bundles labeled “my money” and “house money.”
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# BEHAVIORAL FINANCE, INTRODUCTION

- ▶ Sooner or later, you are going to make an investment decision that winds up costing you a lot of money.
- ▶ Why is this going to happen?
  - ▶ You made a sound decision, but you are “unlucky.”
  - ▶ You made a bad decision—one that could have been avoided.
- ▶ The beginning of investment wisdom:
  - ▶ Learn to recognize circumstances leading to poor decisions.
  - ▶ Then, you will reduce the damage from investment blunders.

# BEHAVIORAL FINANCE, DEFINITION

- ▶ **Behavioral Finance** The area of research that attempts to understand and explain how reasoning errors influence investor decisions and market prices.
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# THREE ECONOMIC CONDITIONS THAT LEAD TO MARKET EFFICIENCY

- 1) Investor rationality
  - 2) Independent deviations from rationality
  - 3) Arbitrage
- ▶ For a market to be **inefficient**, all three conditions must be absent. That is,
    - ▶ it must be that many, many investors make irrational investment decisions, **and**
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## PROSPECT THEORY

# INVESTOR BEHAVIOR CONSISTENT WITH PROSPECT THEORY PREDICTIONS

- ▶ There are three major judgment errors consistent with the predictions of prospect theory.
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# FRAME DEPENDENCE, II.

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- ▶ If you suffer from Loss Aversion, you will think that if you can just somehow “get even,” you will be able to sell the stock.
- ▶ If you suffer from Loss Aversion, it is sometimes said that you have “get-evenitis.”

# DO YOU SUFFER FROM “GET-EVENTIS?” PART I.

- ▶ Consider the following two investments:

**Investment One.** A year ago, you bought shares in Fama Enterprises for \$40 per share. Today, these shares are worth \$20 each.

**Investment Two.** A year ago, you bought shares in French Company for \$5 per share. Today, these shares are worth \$20 each.

- ▶ What will you do? Will you: (1) sell one of these stocks; (2) sell both of these stocks; (3) hold one of these stocks; or, (4) hold both of these stocks?

- ▶ Suppose you are considering a new investment in Fama Enterprises.
- ▶ Does your rational analysis say that it is reasonable to purchase shares at \$20?
  - ▶ **If the rational answer is no, then you should sell.**
  - ▶ **If the rational answer is yes, then you do not suffer from loss aversion.**

## DO YOU SUFFER FROM “GET-

## EVENTS?” PART II

- ▶ However, if you argued to yourself that if shares in Fama Enterprises were a good buy at \$40, then they must be a **steal** at \$20, you probably have a raging case of loss aversion.

# DO YOU SUFFER FROM “GET-EVENTIS?” PART III.

- ▶ There are Two Important Lessons from this Example.
  - ▶ **Lesson One:** The **market** says that shares in Fama Enterprises are worth \$20. The **market** does not care that you paid \$40 a year ago.
  - ▶ **Lesson Two:** **You** should not care about your purchase price of Fama Enterprises. **You** must evaluate your shares at their current price.
- ▶ How about the shares in French Company?
  - ▶ Once again, the lessons are the same.
  - ▶ The market says that French Company shares are worth \$20 today.
  - ▶ The fact that you paid \$5 a year ago is not relevant.
- ▶ Get-Eventitis can be destructive. Famous example: Nicholas Leeson causing the collapse of the 233-year-old Barings Bank.

*Note Bene: For both investments, there will be tax effects. Your careful analysis should acknowledge the existence of taxes and transaction fees, and their impact on your net sale proceeds.*

# THE HOUSE MONEY EFFECT, I.

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