

## Lecture 1

### Course Objectives

- Become a Day-Trader.
- Make better investment decisions.
- This course is also the first level of training for our traders.
- We use this course to scout for new talent.
- Prospective employees can use this course to discover the job before committing.

### Teaching Approach

Our Teaching approach will be to make you understand the most important concepts that are needed to become successful at trading.

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## Lecture 2

### Why be Involved in the Markets?

There are mainly two reasons to be involved in the markets: to invest/trade your savings or to manage/trade other people's money. In both scenarios your objective is to make money.

Most people will have to invest their savings at one point or another in their lives. Having your money in the right stocks can make all the difference when it's time for retirement. Others will trade their savings and can create a consistent source of income.

Managing or trading other people's money is where the real money is at. If you can achieve consistent and profitable returns you can find someone to fund you and trade their money. This is a very good scenario because you have no risk in terms of capital and have unlimited profit potential depending on the amount of capital you have to manage/trade.

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## Lecture 3

### What is a Stock?

**Stock:** A type of security that signifies ownership in a corporation and represents a claim on part of the corporation's assets and earnings.

**Synonyms** Shares, Equity.

Why do Corporations issue stocks?

Why would someone buy this stock?

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How and where can you buy a stock? It depends if the company for which you want to buy that stock is a private or public company.

**Private company:** A company owned by a relatively small number of shareholders and which does not offer its company's shares to the public on the stock market. The company's stock is only traded or exchanged privately.

**Public company:** A company whose ownership is dispersed among the general public and their shares freely traded on the stock market.

In the case of a privately held company, you would have to meet with the owner of that company for him to sell you their stock. In the case of a public company you can just buy the shares on the stock market through your phone.

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## Lecture 4

### What is a Market?

**Market:** A place where people gather for the purchase and sale of products. It's a place where commercial dealings are conducted.

**Auction Market:** Is a market in which the buyers compete on buying prices, and sellers compete on selling prices simultaneously.



**Stock Market:** A market in which shares of publicly traded companies are issued and traded. The stock market provides companies with access to capital and provides investors an easy way to have ownership in companies.

It's just a place where buyers and sellers of stocks meet to transact.

**Primary market:** This is where the issuance of new securities happen. In this market companies raise funds by issuing new stocks through an initial public offering (IPO). The underwriter (a company that helps other companies introduce new securities to the market) will take care of selling those stocks to funds and banks.

**Secondary market:** also called the aftermarket, is the financial market in which previously issued financial instruments such as stock, bonds, options, and futures are bought and sold. ... After the initial issuance, investors can purchase from other investors in the secondary market.

**IPO (Initial public offering):** This is the first time that a stock of a private company is offered to the public. It is very hard for regular investors to get shares at the IPO.

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## Lecture 5

### What is a Stock Exchange?

**Stock Exchange:** The stock market is a general term which is related to a place where stocks are traded. A stock exchange is more specific to the place where the trading is executed, such as ARCA, NSE, NYSE, NASDAQ and so on.

The history of the first stock exchange:

Initially if you had a stock that you wanted to sell, you would have to find a counter party that was willing to buy them from you at a price that you both agreed on. If you wanted to purchase a stock you would have to find a seller who was willing to sell it to you at a price that you both agreed on as well. This made things very complicated for buyers, sellers and traders. What people started to do was to set up meeting locations and times where groups who wanted to buy or sell stocks would meet and transact with one another.



As more participants started to join the group, the organization of this market became a bit hectic. 24 of these traders secretly signed an agreement together, on May 17, 1792, called the Buttonwood Agreement. This agreement stated that: "We the Subscribers, Brokers for the Purchase and Sale of the Public Stock, do hereby solemnly promise and pledge ourselves to each other, that we will not buy or sell from this day for any person whatsoever, any kind of Public Stock, at a less rate than one quarter percent Commission on the Specie value and that we will give preference to each other in our Negotiations.

In Testimony whereof we have set our hands this 17th day of May at New York, 1792." This made these the 24 original brokers of the New York Stock exchange. If anyone wanted to buy or sell a stock he would have to go through them. On each transaction that they made for their client they would keep a commission. The same year they moved from under the tree to a coffee shop right next door. They eventually moved to the building right in front of that tree: the current building of the New York Stock Exchange.

## Lecture 6

### What is a Broker?

**Floor broker:** An independent member of an exchange that can do transactions on behalf of other members of the exchange. Brokers have floor brokers to do their bidding on the floor of an exchange.

The automation of the stock market

The stock market has evolved throughout the years and even though it still has the same structure, it is now fully automated. The human intermediaries that took your orders and found counterparts for your order to get you executed have been replaced by computers that automatically match orders.

Exchanges:

- NYSE: biggest & most demanding in listing requirements
- NASDAQ: less demanding and has smaller and tech companies.
- AMEX: mostly ETFs trade there.

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## Lecture 7

### Orders and Order Types

#### How do you buy a stock?

Stocks are purchased and sold by sending out an order to the stock market.

Information needed on an order:

- Order type
- Ticker
- Quantity
- Side: Buy/Sell
- Price

Example of an order:



**Order:** An instruction to buy or sell a security on a specific stock exchange. There are many order types that vary in complexity. Orders can be sent through a broker or directly to the exchange if you have direct market access.

**Fill:** A fill happens when you get executed on your order. Getting filled means the order you sent out has been satisfied and that you have successfully transacted.

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Different order types:

- Market order
- Limit order
- Stop order
- Stop limit order

**Market Order:** This is a buy/sell order that needs to be executed immediately at any price available. This type of order will always get filled when the stock market is open and the stock in question is trading. Market orders are used when your priority is getting the fill over getting a particular price. This is the simplest order type.

**Limit Order:** A limit order is an order to buy or sell a stock at a specific price or better. A buy limit order can only be executed at the limit price or lower. A sell limit order can only be executed at the limit price or higher. A limit order is not guaranteed to be executed.

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## Lecture 8

### Orders Driving Prices

#### Example of orders driving prices:

Company name:

Ticker:

Listing exchange:

Shares outstanding:

Float:

Market participant current positions:

Participants	Participant Type	Position
1		40,000
2		10,000
3		2,000
4		0
5		2,000
6		5,000
7		1,000
8		0
9		10,000
10		5,000

Market participant orders

Participants	Side	Quantity	Order Type	Price
1	Buy	3000	Limit	41
2	Buy	5000	Limit	39
2	Sell	5000	Limit	55
2	Sell	5000	Limit	59
3	Sell	2000	Limit	52
4	-	-	-	-
5	Buy	1000	Limit	50
6	Buy	2000	Limit	48
7	Sell	1000	Limit	51
8	Buy	5000	Limit	46
9	Sell	5000	Market	NA
10	Buy	5000	Limit	53

Example of orders driving prices(continued):

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**Ticker:** Combination of letters that represent a particular company that is listed on an exchange.

**Bid:** (or bid price) Is the highest price that a buyer/bidder is willing to pay for a product.

**Ask:** (or ask price or offer) Is the lowest price that a seller is willing to receive for a product.

**Spread:** Difference between the ask price to the bid price.

**Level1:** Displays the bid and ask prices as well as quantities. This also displays the last trade executed.

**NBBO (National Best Bid and Offer):** This represents the highest bid and lowest ask available on the market.

**Time and Sales:** Displays every single execution that happens on the market. The executions are displayed real-time and include information like: time, direction, quantity traded and exchange traded on.

**Level2 / Order book:** Electronic list of buy and sell orders for a stock. This list is ordered by price and then by time. The order book lists the number of shares on the bid and ask at every price point.

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## Lecture 9

### Different Players

who are the different players?

- proprietary trading firms.
  - Investors.
  - Retail Traders.
  - Portfolio managers (mutual funds)
  - Hedge Funds.
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Understanding who you're playing against and how they play.

The stock market is a zero sum game. Meaning that for every dollar you make someone else has lost that dollar. For this reason it is important to know who are the market participants that you are playing against and how those participants are likely to act under different circumstances.

Lesson to take away:

Price is determined by supply and demand. Supply and demand can be seen through order flow. Prices don't necessarily change due to new news or new information, but as a result of new orders.

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## Lecture 10

### The 3 Ways of Making Money in the Stock Market:

Going **Long**: buying a stock and selling it back at a higher price.

Going **Short**: Borrowing a stock that you do not own. Selling it. And if the price drops, buying it back at the lower price, giving back the stock to its original owner and keeping the difference of price (which is your profit).

Being **Flat**: Having no position in a particular stock.



## Lecture 12

### Charts & Candlesticks

Charts are just a graphical representations of past price action.

#### Line Chart



#### Candlestick Chart



We will mostly only be using the candlestick charts as they relay more information than the other chart types.

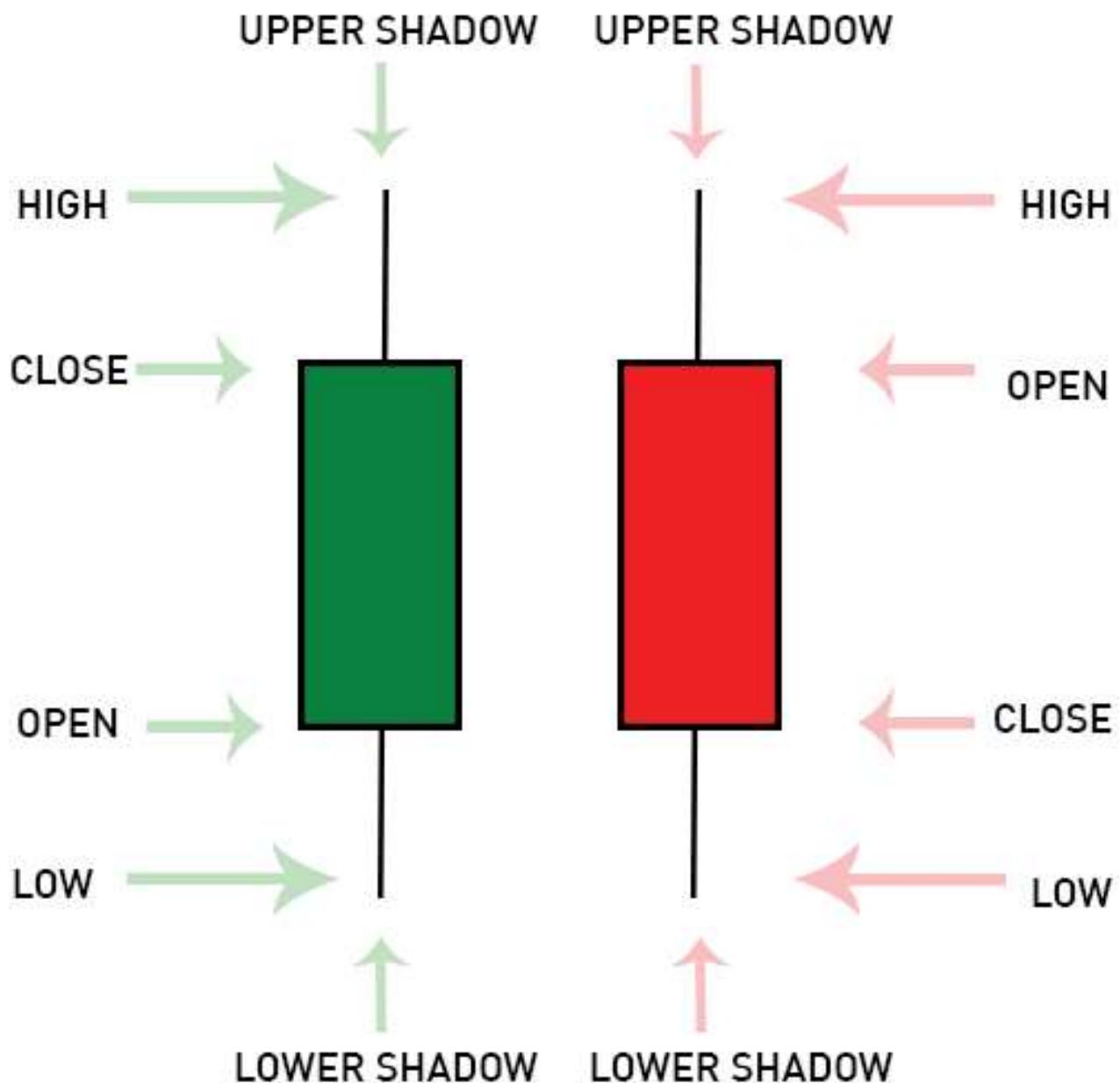
For a better understanding of the candlestick chart, we also need to understand what each individual candle can represent.

## Lecture 13

### Candlesticks

What is a Candlestick?

**Candlestick:** A graphical representation of the high, low, opening and closing price of a security for a specific period. A green Real Body represents a stock that closed at a higher price than it opened at. A red Real Body represents a stock that closed at a price lower than it opened at.



# What can a Candlestick tell us about supply & demand

## Big Candles



Big Red Candle Has an unusually long red body with a wide range between high and low. Prices open near the high and close near the low. Considered a bearish pattern.



Big Green Candle Has an unusually long white body with a wide range between high and low of the day. Prices open near the low and close near the high. Considered a bullish pattern.

## Dojis



Dojis form when the opening and closing prices are virtually equal. Alone, dojis are neutral patterns.



Long-Legged: This doji reflects a great amount of indecision about the future direction of the underlying asset.



Gravestone: The long upper shadow suggests that the direction of the trend may be nearing a major turning point. It is formed when the opening and closing price of the underlying asset are equal and occur at the low of the day.



Dragonfly: The long lower shadow suggests that the direction of the trend may be nearing a major turning point. It is formed when the opening and closing price of the underlying asset are equal and occur at the high of the day.



**Shooting Star** A black or a white candlestick that has a small body, a long upper shadow and a little or no lower tail. Considered a bearish pattern in an uptrend.



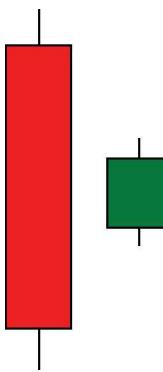
**Hammer** A black or a white candlestick that consists of a small body near the high with a little or no upper shadow and a long lower tail. Considered a bullish pattern during a downtrend.

## Example of Dojis

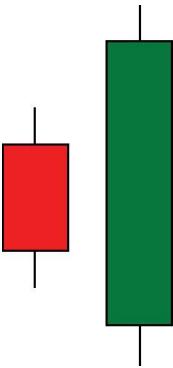




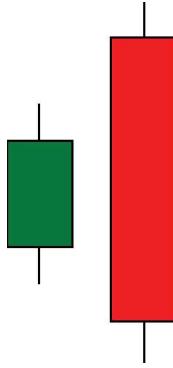
Bearish Harami Consists of an unusually large green body followed by a small red body (contained within large green body). It is considered as a bearish pattern when preceded by an uptrend.



Bullish Harami Consists of an unusually large red body followed by a small green body (contained within large red body). It is considered as a bullish pattern when preceded by a down-trend.



Engulfing Bullish Consists of a small red body that is contained within the followed large green candlestick. When it appears at bottom it is interpreted as a major reversal signal.



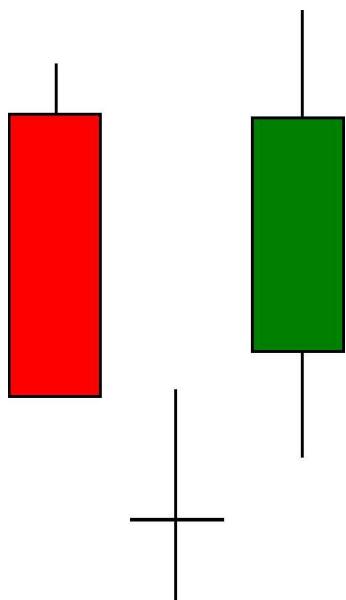
Engulfing Bearish Consists of a small green body that is contained within the followed large red candlestick. When it appears at top it is considered as a major reversal signal.

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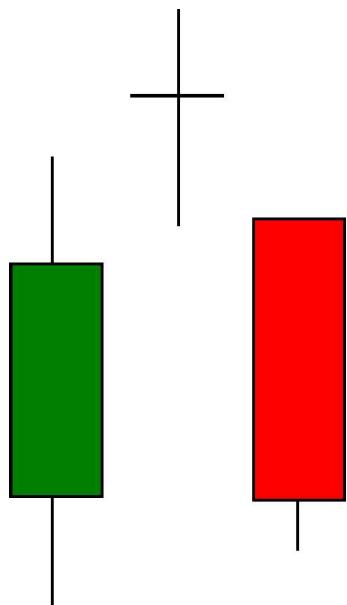
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Morning Doji Star Consists of a large red body candlestick followed by a Doji that occurred below the preceding candlestick. On the following day, a third green body candlestick is formed that closed well into the red body candlestick which appeared before the Doji. It is considered as a major reversal signal.



Evening Doji Star Consists of three candlesticks. First is a large green body candlestick followed by a Doji that gap above the green body. The third candlestick is a red body that closes well into the green body. When it appears at the top it is considered as a reversal signal. It signals a bearish trend.

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## Lecture 14

### Trends

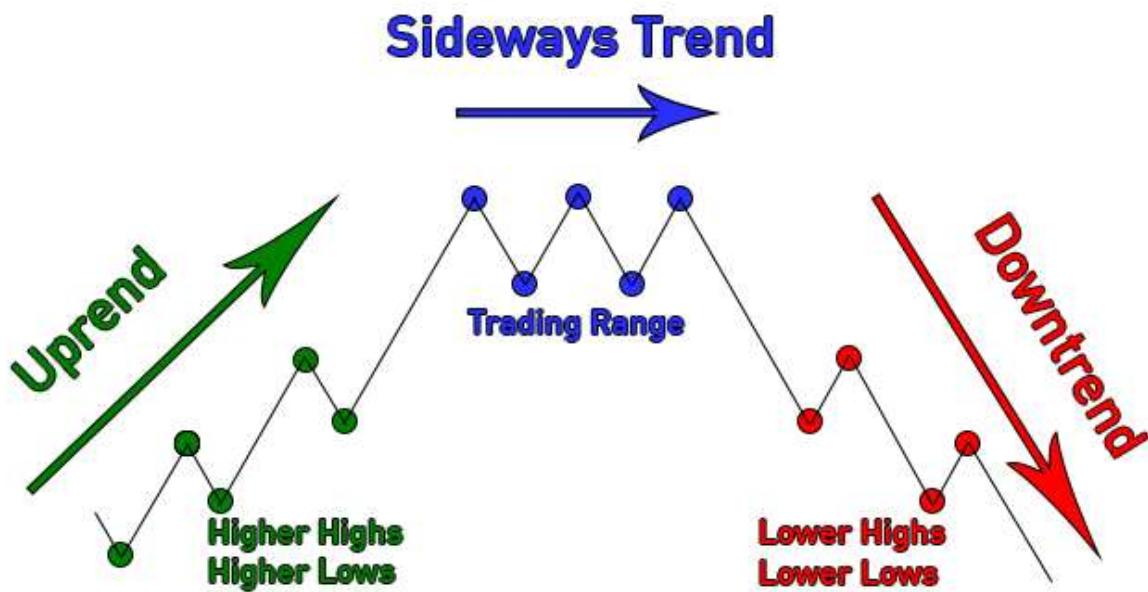
The assumptions:

- The Market Discounts Everything
- Price Moves in Trends
- History Tends To Repeat Itself

Trends:

- Uptrends
- Downtrends
- Sidetrends

### Type of Trends



## Trendlines



## Channels



## Channel Up



## Channel Down



## Trend Lengths

There are 3 different trend lengths:

- Long-term trend
- Medium-term trend
- Short-term trend

Within a long-term trend you have medium term trends that can be of different or same direction. Furthermore, within the medium term trend you can have short-term trends that are of different or same direction.



## Support And Resistance

- What causes support and resistance
- Round Numbers
- Role Reversal



## Lecture 15

### Chart Patterns

**Chart patterns:** Distinct formation on a stock chart that creates a trading signal, or a sign of future price movements. Chartists use these patterns to identify current trends and trend reversals and to trigger buy and sell signals.

There are two types of patterns within this area of technical analysis, reversal and continuation.

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### Head and Shoulders



## Double Tops



## Multiple Tops



## Double Bottoms



## Multiple Bottoms



## Ascending Triangle



## Descending Triangle



## Wedge



## Wedge Up



## Wedge Down



## Cup and Handle



## Rounding Bottom



## Lecture 16

### Volume

#### The Importance of volume

- Why Volume is Important
- Volume and Chart Patterns
- Volume Precedes Price



**Average volume:** The average daily quantity of shares that have been traded for the past X period. Usually this is calculated on the past 3 months.

**Relative volume:** Relative volume compares the current volume to the average volume that the stock should have at the same time of day. If the relative volume is over 1 this means the stock is experiencing more than its usual volume. If for example the relative volume is 4, this means the stock is experiencing 4 times its usual volume.

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## Lecture 17

### Indicators

**Technical Indicator:** Mathematical computation based on historical price and volume which aims to help forecast future price movement and is mostly used for entry/exit signals.

### Bollinger Bands

Bollinger bands are composed of a N-period moving average and two bands. An upper band that is set at X times above the moving average, and a lower band that is set X times below the moving average.



## Lecture 18

### Relative Strength Index (RSI)

This is a momentum oscillator that tracks the speed and change of price movements.

$$RSI = 100 - \frac{100}{1 + RS}$$

RS = average return of positive periods / average return of negative periods

The RSI gives an indication of recent price action performance and can range from 0 to 100. The default periods computed on is 14 days. The lower the RSI the more oversold the stock is and the higher the RSI the more overbought the stock is. Usually an RSI under 30 is considered oversold and over 70 is overbought.



## Lecture 19

### Average True Range (ATR)

This is an indication of price volatility.

True Range (TR) =  $\max[(\text{high} - \text{low}), \text{abs}(\text{high} - \text{close}_{\text{prev}}), \text{abs}(\text{low} - \text{close}_{\text{prev}})]$

ATR =  $[(\text{ATR}_{\text{prev}} \times (n-1)) + \text{TR}] / n$ , where n is the time period.



## Lecture 20

### Expectancy

Let's play a game:

You have 2 envelopes from which to choose:

Scenario 1:

Envelope 1 has a 100% chance of having 1\$

Envelope 2 has a 10% chance of having 10\$

Which would you choose?

Scenario 1:

Envelope 1 has a 100% chance of having \_\_\$

Envelope 2 has a 10% chance of having \_\_\$

Which would you choose?

Scenario 1:

Envelope 1 has a 100% chance of having \_\_\$

Envelope 2 has a 10% chance of having \_\_\$

Which would you choose?

### Expected Value (EV)

The expected value of a discrete random variable is the probability-weighted average of all possible values.

$$E[X] = \sum_{i=1}^{\infty} x_i p_i,$$

Where, X is the value

P is the probability

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**Expected value:** The expected value is an anticipated value for a given investment. In statistics and probability analysis, the expected value is calculated by multiplying each of the possible outcomes by the likelihood that each outcome will occur, and summing all of those values. By calculating expected values, investors can choose the scenario that is most likely to give them their desired outcome.

### Trading example:

Stock ABC trades at 20\$, you perceive that it has a 60% chance of going to 23\$ or a 40% chance of going to 13\$.

Stock XYZ trades at 10\$, you perceive that it has a 40% chance of going to 16\$ or a 60% chance of going to 8\$.

Which stock should you buy?

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## Lecture 21

### Gambling vs Educated Betting

- Any investment can be a gamble.
- A house, a stock or anything that's price can fluctuate can be considered gamble.
- If your decision on your purchase is uneducated then it is a gamble.

**Gambling:** Play games of chance for money. The act of gambling money on the outcome of an unpredictable event.

**Educated Betting:** The act of gambling money on the outcome of an event that you perceive a positive expected value.

### What do traders do?

- Educated Betting.
- We are in the business of betting.
- There is no certainty in the outcome of our trades/investments.

The reason it's important to know that you are in the business of betting, is that even though you make the right bets, you will take losses even though those were the right bets to take.

IF YOU LOSE MONEY IT DOESN'T MEAN YOU DID SOMETHING WRONG.  
IF YOU MAKE MONEY IT DOESN'T MEAN YOU DID THE RIGHT THING.

### The Casino vs the Market

The casino is placing bets that have a very small positive expectancy, against its customers. In the long run these bets add up.

Example: In the roulette game you have an expectancy of -2.7% and the casino has an expectancy of +2.7%

When you play in the casino you play against the house. The house has the edge (positive expectancy). Casinos build their games, so that they always have the edge.

In the markets you are not trading against one counterparty. You are trading against other market participants. Thus you can create your own edge by making the right decisions.

## Lecture 22

### Batting Average & Win/Loss Ratio

**Batting average:** The average probability that a trader is right. Calculation: number of profitable trades divided by total number of trades during a specific period.

**Win/Loss Ratio:** The ratio of the average profitable trades over the average un-profitable trades.

Example:

Based the historical trades you have done for a particular strategy, calculate your historical batting average and win/loss ratio.

Strategy 1		
Date	Symbol	Profit
1/2/2017	ABC	5%
1/3/2017	BAC	-4%
1/6/2017	NOK	8%
1/7/2017	SIRI	-6%
1/8/2017	AAPL	4%
1/9/2017	GOOG	5%
1/10/2017	MSFT	-7%
1/13/2017	C	4%
1/14/2017	ALU	-2%
1/15/2017	XYZ	1%

Average return =

Batting average =

Win/loss ratio =

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## Lecture 23

### Risk Management

#### What's Risk ?

An action or an activity that has a potential to go wrong.

There are many things in life that can be risky: skiing, skydiving, being in a relationship, making an investment, trading.

Why do we take risk? For the Reward.

Knowing the risk is necessary in order to manage it.

**Systematic Risk:** The risk inherent to the entire market or an entire market segment. Systematic risk, also known as “undiversifiable risk,” “volatility” or “market risk,” affects the overall market, not just a particular stock or industry. This type of risk is both unpredictable and impossible to completely avoid. It cannot be mitigated through diversification, only through hedging or by using the right asset allocation strategy.

**Unsystematic Risk:** Company- or industry-specific hazard that is inherent in each investment. Unsystematic risk, also known as “nonsystematic risk,” “specific risk,” “diversifiable risk” or “residual risk,” can be reduced through diversification. By owning stocks in different companies and in different industries, as well as by owning other types of securities such as Treasuries and municipal securities, investors will be less affected by an event or decision that has a strong impact on one company, industry or investment type.

**Risk Management:** Risk management is the process of identification, analysis and either acceptance or mitigation of uncertainty in investment decision-making. Essentially, risk management occurs anytime an investor or fund manager analyzes and attempts to quantify the potential for losses in an investment and then takes the appropriate action (or inaction) given their investment objectives and risk tolerance.

## Risk mitigation

Risk mitigation is defined as taking steps to reduce adverse effects.

**Risk Acceptance:** Risk acceptance does not reduce any effects. However it is still considered a strategy.

**Risk Avoidance:** Risk avoidance is the opposite of risk acceptance. It is the action that avoids any exposure to the risk whatsoever.

**Risk Limitation:** Risk limitation is the most common risk management strategy used by businesses. This strategy limits a company's exposure by taking some action. It is a strategy employing a bit of risk acceptance along with a bit of risk avoidance or an average of both.

**Risk Transference:** Risk transference is the involvement of handing risk off to a willing third party.

## Risk Limitation

Ways to limite losses:

- Stop losses
- Hedging

## Lecture 24

### Money Management

**Money management:** The process of budgeting, saving, investing, spending or otherwise in overseeing the cash usage of an individual or group. The predominant use of the phrase in financial markets is that of an investment professional making investment decisions for large pools of funds, such as mutual funds or pension plans.

### Importance of Money management

Money Management example:

#### Percentage Gain Required To Make Back Losses

% Of Account Lost	% Gain Required To BE
-20% Loss	+25% Gain
-30% Loss	+43% Gain
-40% Loss	+67% Gain
-50% Loss	+100% Gain
-60% Loss	+150% Gain

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## Rule of thumb

- Maximum risk per position should never exceed 5%.
- If you have \$10,000. The maximum that you can lose should be 500\$
- 2% is ideal.
- There is a very real probability that you take 10 losing trades in a row.

## The importance of taking losses

You are paid to take losses.

Taking profits is easy. Anyone can do that. Taking losses is hard. Only the traders that are able to do what is hard for them to do become successful.

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## Lecture 26

### The Importance of Psychology

Trading psychology is by far the most important aspect in trading. It is more important than technical, fundamentals and EVEN risk management. The reason for this is that your emotions can control you in a way that everything you know about trading is thrown out the window and thus your knowledge can't even help you. Traders continually improve on what they see that they need to improve on; some traders will improve on chart reading, some will work on risk management and so forth. The problem is that traders forget to work on their emotions and psychology. This is due to the fact that they don't know that this is actually affecting their trading. You cannot improve on what you don't know is actually there. And trust me; humans are filled with biases that interfere with their trading.

To better get an understanding of how to improve on our trading psychology, let's take a look at some emotional biases that humans have:

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## Lecture 27

### Loss Aversion

Loss aversion theory states that losses have a bigger negative impact than equivalent gains have positive impact. This means that the negative feelings associated with giving up an object are greater than the positive feelings that are associated with acquiring that same object. This is what actually explains some of the observations in the endowment effect and in the status quo bias.

Studies have been done to test the behavior of people when faced with a decision that can impact them in both a positive and a negative way. Each group tested was placed at a different reference point (current situation) in a way that their decision will affect their current situation in both a positive and a negative way. Both groups made decisions based on their reference point. They both made decisions that would limit the loss from their reference point instead of making their decision based on the gain that they could achieve from a different decision.

There have been many studies that have shown that losses are twice as powerful as gains. This is because when loss occurs there are strong feelings of blame and regret. These feelings and the anticipation of having these feelings affect us so much that we overvalue the impact of a loss over a gain.

### How it affects our trading:

Traders tend to view loss in a more intense manner than they view gain. They also view loss from a reference point of where they have been. For example if a trader started the day at zero dollars and finished at 500\$ he might be happy. But if he went all the way up to 1000\$ of profit and then finished the day at only 500\$ he won't be happy as his reference point is now 1000\$ and the loss of 500\$ feels greater than the gain of 500\$.

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## Lecture 28

### Endowment Effect

This anomaly has been heavily studied and has shown that we place greater value on something when we own it than when we don't own it. Basically if I asked you to place a dollar value on a mug, if I gave it to you first (so that you are its owner) you would place a higher value on it than if I hadn't given it to you. Multiple studies have shown this. As soon as we own something we place greater value on it. This brings us to the point that we demand way more to give up something that we own than we would have paid for it if we didn't own it.

Studies on this anomaly were done by grouping, randomly, groups of logical and smart people, and distributing to half the group an object. They then proceeded to ask the group to value the object. The part of the group who had the object valued it twice as much as the people who didn't receive it. Through many studies this anomaly has appeared where the willingness to pay for something we don't own is low compared to the willingness to accept a payment for the same thing if we did own it.

Initially we thought that we place greater value on the thing we own because we see it as more attractive than it actually is. Further studies have shown that people actually see the object they own in the same way that people who don't own see it. So it wasn't the fact we view it in a more favorable way that increased our value of the object. Turns out to be that we over evaluate the pain it would cause us to lose something that we own.

### How it affects our trading:

We place greater value on a stock we own than if we didn't own it. Because of this we are biased and tend to keep positions way longer than we should. I sometimes tell traders to liquidate their position just for ten minutes and if after ten minutes they still want to get back into it they can buy it back. Every time I have done that the trader didn't buy back the stock as they didn't value it in the same way they did when they had the position. As soon as they liquidate the stock it seems there is an instant dis-endowment effect that happens and they can see that they do not think this position is good value.

## Lecture 29

### Status Quo Bias

This bias states that we prefer our current state over other states available.

Several studies have been done where groups were asked to choose between different situations that they would like to be in. The participants did not belong in a situation to begin with so they did not have a “status quo”.

Those were large groups and were selected at random so we expect that re-production of the study would yield similar behavior in the choices people make. In those studies another group would be put in a random choice and then asked if they would change to another choice. Since these people were selected at random we would expect for most to change to the choice that best suited them. We also expected for the choices selected to be similar to the choices selected by the group who did not start with a “status quo” choice. This did not happen as most people just remained in the choice they started out with.

The more choices the studies introduced the more the status quo became stronger and people had a larger tendency to remain in it.

Further studies have been done to try to explain why we behave this way. These studies put participants in two different status quo situations and were asked if they would change to go to the other situation. The two situations had something better and something worst from one another. Expectation was for the participants to change to the situation that best suited them and since the participants were placed randomly it was expected that half the group would change to the other situation. This did not happen as most people stayed in the situation that they were placed in. This brought the studies to conclude that we value the loss that we get from leaving the status quo in a greater manner than we evaluate the advantage we get from leaving it.

### How it affects our trading:

Traders prefer staying in a position that isn't moving. That isn't making them money instead of just letting it go and trying another trade. They prefer remaining in what they already know. As per the bias, the more choices someone has the stronger the bias. There are thousands of stocks out there so why stay stuck on this one stock you have? The more choices we have the stronger the status quo.

## Lecture 30

### Anchoring Effect

Anchoring is a term used in psychology to describe the common human tendency to rely too heavily one trait or one piece of information when making decisions.

Studies have tested how we value a product after being exposed to high or low number before. People being exposed to a high number valued the product almost 4 times more than people who were exposed to a low number before.

Anchoring also happens when we hold on to a price or piece of information and disregard more recent information.

#### How it affects our trading:

Traders get anchored way too much to the first analysis they made of the stock. If a trader thinks a stock might go up, he will tend to hold that belief for a long time and disregard new information that might or should make him change his mind. Another common anchor is the purchase price or target price of a position. Some traders refuse to sell a stock close to their profit target and just wait for the price to reach their target only to see the stock turn around and reach their stop instead.

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## Lecture 31

### Confirmation Bias

Confirmation bias states that we search for information (or interpret information in a way) to confirm our beliefs. Humans have pre-existing beliefs and they sometimes trick themselves that they were led to those beliefs through research on analysis of information while in fact they specifically looked for information to confirm that belief.

An example of confirmation bias would be someone going online to Google why is milk bad for you. You will obviously find reasons why milk is bad if that is what you are looking for. The right thing to do would be to look for information that would disqualify your hypothesis and analyze that.

#### How it affects our trading:

One of the biggest biases for traders. Traders tend to have a belief about the direction of a stock and then look for reasons to take that position. The problem in trading is that there will always be reasons to be long, short or flat. So if you are looking for a reason you will find many. Mostly this happens when a trader has a position. When a trader has a position that is the biggest reason for the trader to want/to believe that the stock is going his way. Because of this the trader goes to try to find reasons why it should do that. The right approach would be to look for reasons why it won't go that way and evaluate that.

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## Lecture 32

### History of Mankind

Humans have been on earth for the past 200,000 years. Throughout this time we have evolved to have certain behaviors that have been passed on through genetic evolution. These behaviors/instincts were passed on because the people who didn't have them couldn't survive in that environment to pass them on (survival of the fittest). So the behaviors that were appropriate for that environment are in our DNA.

The problem is that we are no longer in that environment. Civilization only started 6000 years ago and industrialization only 200 years ago. So we are still in a new environment and our brains haven't caught on that the behaviors it has aren't appropriate for this new environment. It might have been appropriate to be scared of everything back then, since anything could have killed you but this isn't the case anymore. Because of this change of environment we have all these behavioral biases which are counterproductive for our success.

The endowment effect might have been helpful in the past; valuing something that you own highly meant you kept your stuff more firmly and thus would have had better chances to survive.

Being content with the status quo and not changing probably would have saved your life since with every change you took you faced new risks of being attacked by a predator.

Loss aversion meant you valued risk way more than you valued gains. Back then the more you were scared of losses the better. Anything could kill you.

In today's age though, these behaviors negatively affect us. We are in no danger whatsoever and over sensitization of loss distorts our decision making.

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## Lecture 33

### Misconception About Psychology in Trading

Typical trading books talk mostly about Fear and Greed. Fear of losing money and greed of wanted to make too much money. We are going to dispel this right away.

First let's look at greed. Greed is viewed as one of the downfalls of many traders. This comes out in movies, book and even thought at some schools. This cannot be any farther from reality. I have never seen a trader not be successful because he was too greedy. I have never seen a worker fail because he was too greedy. I have seen though many traders fail because of fear. The only things that interfere with a trader doing what he is supposed to do is feelings of fear. The things we fear have the greatest control over us. Greed is not an emotion that can control and manipulate us. Fear on the other hand is. Now many people mix up the situation they find themselves in when they are in a winning position and want to hold it for longer as being their greed. In fact it is not greed; it is the fear of missing out on an opportunity. We know that if we get out of the position and it continues to go our way we will feel regret and blame ourselves for getting out too early. Because we anticipate and fear having those feelings in the future we decide to stay in that position to avoid having those feelings. This is what loss aversion states as we place so much weight on how that loss of opportunity will feel.

Now let's look at fear. The common belief is that fear of losing money is the problem. Although they got the fear part right. The actual fear is not of losing money but in feeling a certain type of way. We all know what we are getting in too and we know losing money is part of the process. The fear we have is actually about having certain feelings. Traders commonly blame themselves for losses and spend so much time and energy regretting their past decisions. The feelings of blame and regret are extremely intense and traders develop fears around them. These fears are the major drivers of trading behaviors.

The only thing that controls us is fear and the only thing we fear is negative emotions.

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## Way to Improve on Trading Psychology:

To improve on trading psychology you need to do two things. First you need to read as much as possible about the subject. The more you know about how your brain works the better you will be able to realize when your behavior is not logical. Through this knowledge you will also have an easier time in doing the right behavior.

Second you need to review your days. Not to review your trades but your emotions and how those emotions affected your decision making. When you see there is a particular bias that affects you often address it by noting down specific actions to take on your next trades.

Example: If after reviewing your trading day, you realize that you held on to a winning position too long because you thought it could go higher. You know that this is caused by the fear of regret that you will get if you get out of the stock and it continues higher. So you put on paper “it’s ok to take money off the table and let the stock continue without you” and read that every time you are in a winning position that you are considering selling or not. You continue doing this until it becomes natural.

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