Trading Evolved

Building a Trading Plan using Institutional-grade Technology Made Easy

Overview

This comprehensive trading guide is designed to help both beginners and advanced traders understand the benefits of applying statistical and technical analysis to an investment strategy.

We'll walk you through the basics of the markets to advanced strategies, and along the way we'll show how our platform uses artificial intelligence and predictive analytics to create confident trade ideas in an age of market uncertainty.

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1. Finding Trades

Introduction:

Learning about stocks and options is a first step in becoming a successful investor. In addition to understanding trends in the overall market, concepts like volatility and how a stock can move from earnings to earnings cycle are important elements to understand. You'll also want to know which criteria makes stocks good candidates for buying and selling. Tradespoon's proprietary platform assists you with the help of tools such as our called Trade Idea Tool and Seasonal Charts, here's a quick preview.

Trade Idea Tool

Tradespoon Trade Ideas combines both fundamental and technical analysis to forecast the probability and predictability of each stock for next day or for a specific period of time. We do this by analyzing over 8000 stocks that trades at NASDAQ, New York Stock Exchange, and AMEX. We assign probability and predictability depending upon whether their value will increase, decrease or remain static for the period in question.

Symbol	Industry	Price	Today's Change	YTD	Support	Resistance	Trend	Rating	Time Horizon (Days)
HAS	Leisure	75.14	2.93%	36.69%	72.96	77.32	10	9	50
PGR	Insurance	35.46	7.11%	31.14%	34.41	36.51	10	9	50
NKE	Apparel	132.78	0.31%	39.72%	125.01	140.55	10	10	50

Figure 1A- Tradespoon Trade Ideas- Bullish

Figure 1A shows Tradespoon Trade Idea searching for stocks with bullish outlooks and expected to move higher. The tool provides a daily list of stocks that are ideal for trading to the upside, based on the predictability and probability of the stock value being higher. For instance, in the case of Hasbro (HAS), we see that based on our algorithm, the trend is upwards. Score of 9 means that there is high probability that the stock value will increase throughout the next 50 days. 10 is the maximum score possible.

Seasonal Charts

Seasonal Charts can help you foresee the future of a stock by looking at previous price action. The charts are based on independent models. They provide short-term price predictions and key support and resistance levels. In Figure 1B, the orange line indicates the predicted price for the next 10 days, the blue line indicates the actual price of the stock during the year, and the green line indicates the predicted stock price over the years.

Figure 1B- Seasonal Chart- Apple (AAPL)

In this example, overhead resistance for AAPL is at $134.25. This is a bear instance and you should sell. For the next day, the support shown by the red line is at $116.735, which indicates a short term buy signal. Whether you're a day-trader, interested in long-term positions, or swing trading, our tools and services allow you to find profitable trade ideas based on your investment criteria.

2. Trading for Income

Introduction

There is a fifty-fifty chance of making money if you buy a stock. It might go up or it might go down. Trading options, on the other hand, can reduce your cost basis and, if you trade small and trade often, you can be correct 60% of the time or better! As a result, if you can structure your portfolio and build your trading plan such that you are correct 60-70% of the time, you can steadily grow your portfolio on monthly basis.

Using Tradespoon for Options

Options spreads are an important part of what we do. Although spreads limit your upside, their limited risks help to withstand short term volatility in the market. Spreads are simple to learn and can be executed over and over again on a monthly basis to generate a monthly income. Spreads work well with Tradespoon tools like Stock Forecast and Probability Calculator, without having to be 100% accurate on predicting direction.

Tradespoon's technology works best by selecting 50 to 75 days until expiration, so you have to ascertain the Option Expiration Month. If this is a tad confusing now, don't worry, we cover the details of picking expiration months in subsequent chapters. It is also important to learn Volatility Ranking and how options behave, as implied volatility changes before the earning season and after the earning season. This too is covered in our discussion of Advanced Options Strategies. Since you are improving your Probability of Success by 60-80%, it is very important to trade small and trade often to make sure that you do not sustain substantial losses when there is a market sell-off or short-term volatility. The concept of Maximum Draw-Down, which is basically how much you can tolerate losing at once, is important in this context.

Options Spreads

Spreads are limited risk/reward positions. For instance, Figure 2B shows a risk graph for a strategy known as a Call Spread (covered in Chapter 13). The profit and loss along the y-axis and price of stocks along x-axis. The maximum loss is at point A and maximum gain is at point B. The Breakeven point is where the x-axis of profit and loss intercepts the blue line.

In a bull call spread, when the stock price goes up, you are making more profit and vice versa. We will see in Section II on Advanced Strategies that different spreads have different sloping risk graphs. Bull call spread is one we use quite often.
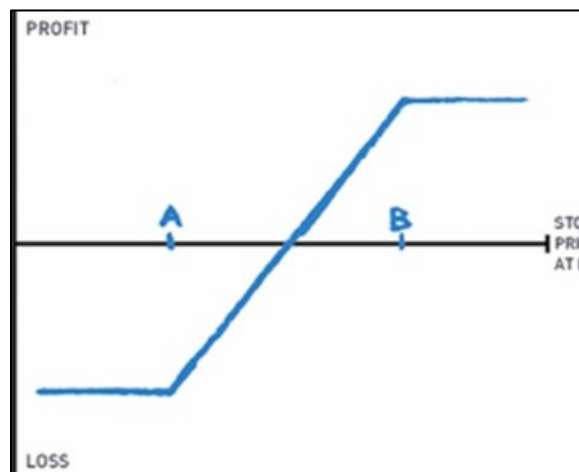
3. Updates & Picks

Introduction:

Tradespoon develops technology to help you learn what stocks to trade, the direction of those stocks, whether they move up, down or stay static, and at what price to buy or sell a Stock or option. Tradespoon members can receive trade recommendations from three services:

ActiveTrader (Stocks & Options)

Our ActiveTrader service provides a daily-updated list of 3 bullish and 3 bearish stock and options trades with entry, target and stop-loss prices. This service is designed for intraday trading, or holding positions for 1-2 days. The service provides two entry/exit strategies that are dependent upon the premarket S&P 500 futures for that day.

Note: It is possible to hit the Target price multiple times throughout the trading day using the same entry prices. Signals are meant to last for 1-5 days as long as vector figures in the Stock Forecast Toolbox;s 10-day prediction confirms the same direction as the original pick
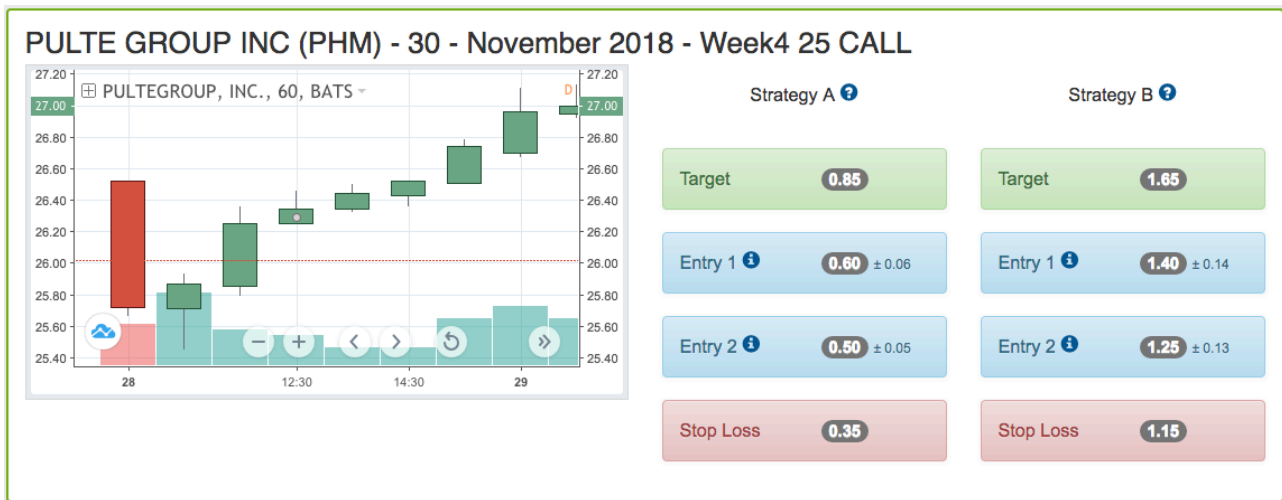
ActiveTrader- Bullish Option Recommendation (11/28)

ActiveTrader- Bearish Stock Recommendation (12/04)

MonthlyTrader (Stocks & Options)

This service provides a weekly-updated list of 3 bullish and 3 bearish stock and options trades with entry, target and stop-loss prices. MonthlyTrader is 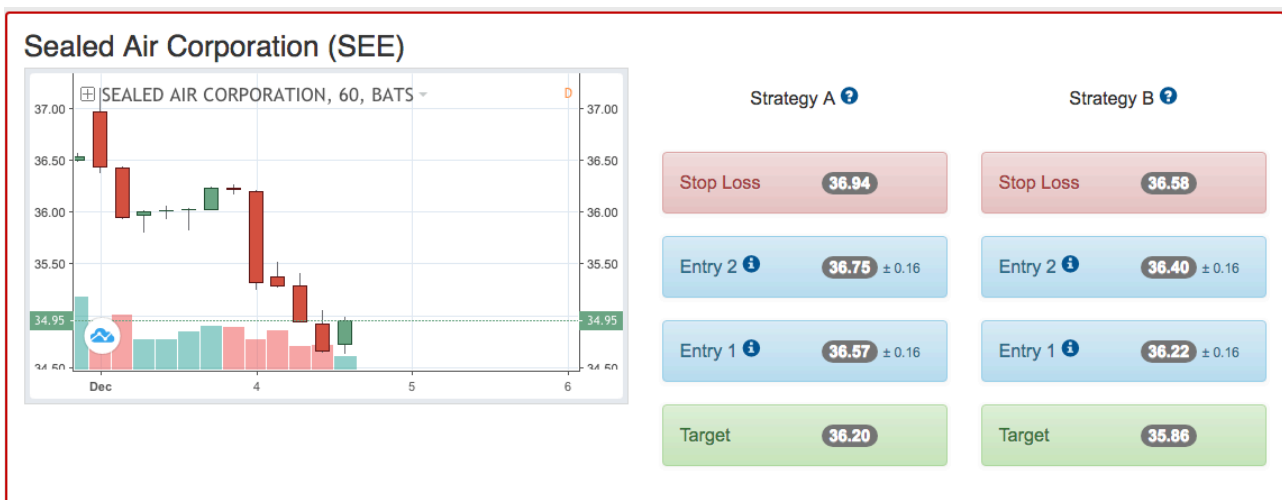designed for swing trading and positions are typically held for 5-20 days or until target or stop-loss levels are hit. MonthlyTrader mimics our Premium Membership Picks service. The only difference is that we do not send emails and SMS messages each time we trade. In addition, we give you more trading ideas than the Premium Membership Picks, but the process of finding these is the same. We use the Tradespoon Bulls and Bears Tools along with the Stock Forecast Toolbox to generate signals that both models agree on. This service also provides two entry/exit strategies that are dependent upon the premarket S&P 500 futures for that day.
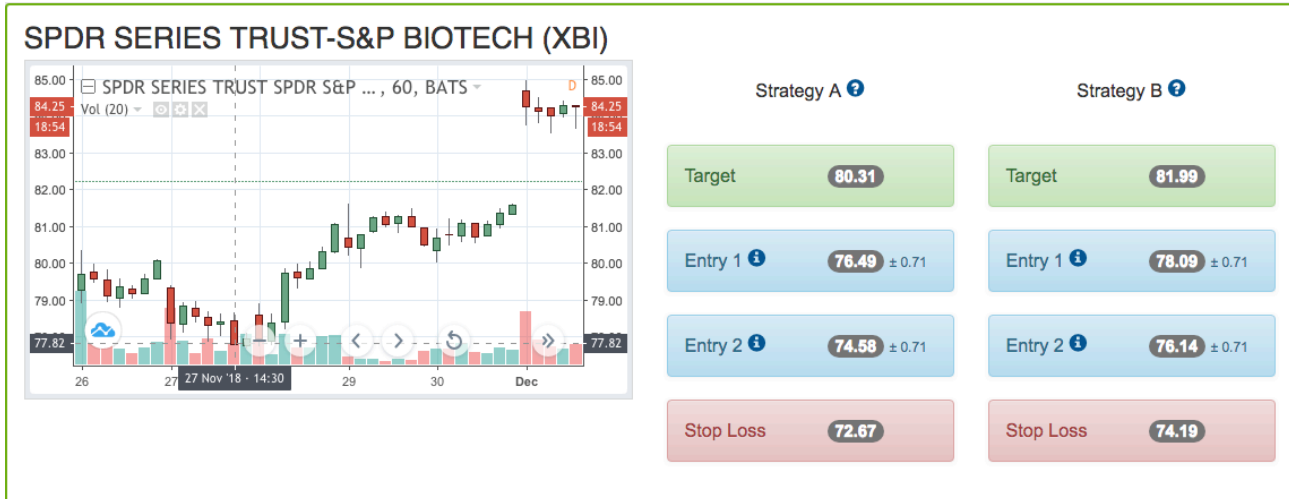
MonthlyTrader- Bullish Stock Recommendation

MonthlyTrader- Bullish Option Recommendation

Premium Membership Picks

As part of our Premium Membership, we'll periodically alert subscribers about our highest quality trade ideas backed by analysis from our trading research team. Subscribers receive a total of 4-6 picks per month. These trade picks are supported by our proprietary algorithms and stringent criteria and are determined to have the highest statistical chances of success:

Criteria for analysis:

- Tradespoon's *Value/Momentum Score & Outlook*

    o A proprietary 1-10 score indicating our long-term outlook of 1 to 5 years for a particular stock. 10 being the most favorable expected risk and return outlook.

    o To generate this rating, Tradespoon's platform deploys an artificial neural network to apply advanced algorithms that factor in fundamental and technical analysis to determine expected risk and return.

    o Value is captured via Tradespoon's *Intrinsic Valuation*-supported by our research team.

    o Momentum is captured via Tradespoon's *Analyst Revisions & Price Momentum analysis*.

- Recent news and price movements.

- Long-term view of the stock based on discounted cash flow and asset evaluations analysis.

- Performance against stock's peer group.

- Performance of stock compared to state of industry sector.

Proprietary data included in each pick:

- Entry and exit prices for Stock and Options trades.

- Entry and exit prices for more advanced strategies such as Option Spreads, Calendars or Butterflies.

- Key support and resistance levels.

- Technical indicators like Fibonacci Retracements.

- Upcoming events such as earnings announcements.

- Recent news and commentary.

- Major events that may have occurred for a stock.

- Past earnings announcement details.

- Data from our *Probability Calculator,* which indicates the probability of a stock reaching a certain price point by the expiration of the pick.

- Short-term predictions for 1-10 days.

- Evening videos that describe the fundamental and technical aspects of the pick using Tradespoon's tools.
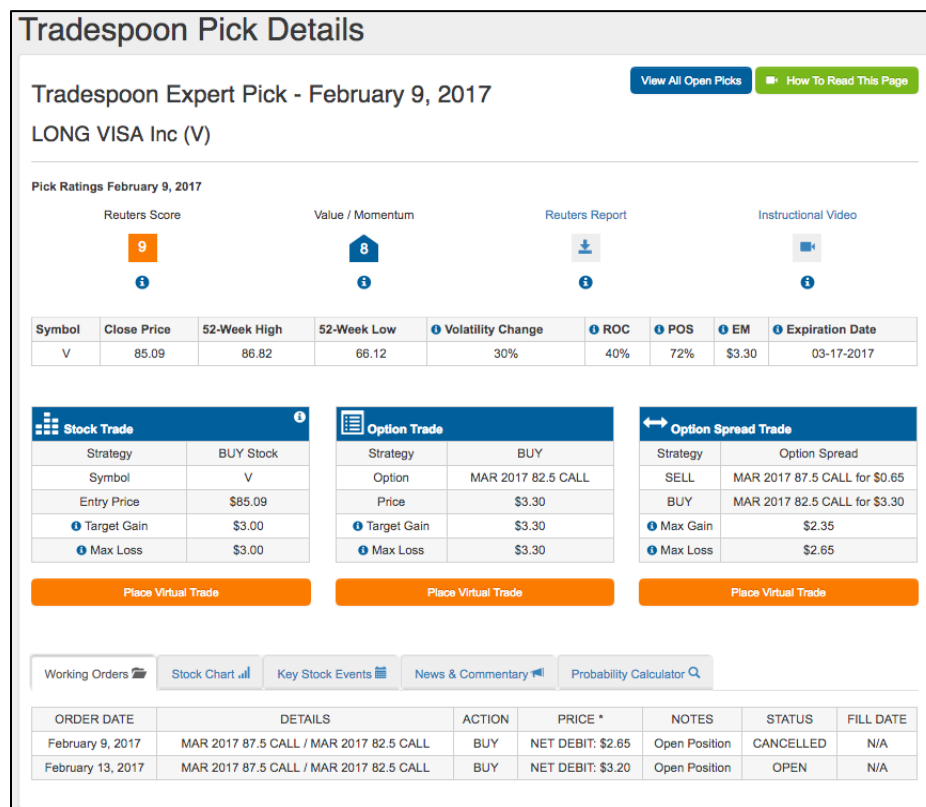

Figure 3A- Tradespoon Premium Membership Picks

4. 5 Steps to Successful Investing

Introduction

This checklist will help you get started with formulating a trading plan and determining what your style and goals should be as an investor. The overall goal here is to move to a more managerial style of trading and stay ahead of trends, rather than chasing and reacting to the market.

Step 1: Stock Market Outlook

Whether you are a day trader, beginner or professional, the starting point is to develop an outlook for the overall market. Is the stock market is in an upward trend, downward trend, or in a trading range?

Step 2: Bullish, Bearish or Neutral Bias?

The second step is to know whether the assets you are trading, whether it's a stock or an option, is Bullish, Bearish or Neutral Bias for the time horizon that you are trading?

Step 3: Support & Resistance Levels

The third step involves understanding Support and Resistance Levels for the time horizon that you are trading. That is, knowing what the Buy Signal and Sell Signal are by looking at the Support and Resistance Levels. The Tradespoon Stock Forecasting Tool can help.

Step 4: Correct Trading Strategy Selection

The fourth step is to select the correct trading strategy. For example, if you buy a stock, there is a 50% chance of it going up and a 50% chance of it moving down in the next minute or day. If you trade options, you can increase your Probability of Success to 70-80% based on your risk tolerance. Also, options allow you to improve the cost basis and pay less than buying shares outright.

Step 5: Trading Plan

The final and most important step is your psychology. Having a concrete trading plan can help you overcome the emotions when a trade turns against you. It's important not to act out of emotion but remain rational and follow the trading plan. Tradespoon's technology works to eliminate the emotional pitfalls and psychology from the trade, helping you to avoid making decisions based on fear and greed.

By formulating and following a concrete plan, you can eliminate psychological impulses for getting in or getting out of positions. So effectively, not only do you have to be a disciplined trader, but also have technology backing you. And remember to 'Trade Small and Trade Often'

Applying Tradespoon's Tools & Services

Stock Forecast Tool

Tradespoon's Stock Forecast tool is designed to predict or anticipate how a stock's price trend is moving in the short and long-term future. It relies on mathematical formulas of neural network technology, digital filtration and statistical spectral analysis for the final decompression of company trend from market noise.

The Stock Forecast Tool allows a computer to attain information from a historical set of data, find a mathematical pattern and predict stock's price trend for a time period of 10 business days up to 6 months. The goal is to maintain predictions with the highest possible accuracy.

Tradespoon's **Premium Membership Picks**, **ActiveTrader** and **MonthlyTrader** services provide you with trade recommendations to help you follow our guidelines and become more successful.

Seasonal Charts & Probability Calculator

Our Seasonal Charts show you what the future looks like for the stocks, in terms of how the stock acts today and how it has behaved for the past 25 years. You'll also be able to determine if there is any correlation between historical price movements and current price movements? We predict the support and resistance levels for next day to up to the next 75 days.

Our Probability Calculator gauges the probability of the stock reaching a certain price point by a certain time range.

If you are trading stocks, we highlight the best candidates for trading and identify optimal entry and exit prices. If you are an options trader, we suggest how to execute a call or a put, and if you are spread trader, we tell show you the best options to trade. According to our statistical analysis, it is important to trade small and trade often as it increases the probability of success, just as the chance of a 7 coming up more often when rolling two dice. Also, it is equally important to follow guidelines in calculating the Return on Capital and knowing when to get in or get out of a position.

5. Intro to Options Trading

Introduction:

Are you finding it difficult to generate income buying and selling stocks? That's why many traders turn to specific options strategies to set up higher probability/defined-risk trades specifically designed for markets just like this. Although many investors buy and sell stocks, a pivot to options can be difficult without a guided transition.

Advantages to Options Strategies

One popular misconception about options is that they are too complicated or risky. Strategies like option puts and option calls, in reality, can *reduce risk* and provide certain advantages over trading single stocks. It's worthwhile to understand what these advantages are, and then consider augmenting your portfolio with options strategies. If you can create a hedge for your portfolio or generate a steady income by trading options against the underlying stock, you can greatly improve your monthly returns. So, let's see what those advantages are.

1. Cost Basis Reduction

Options allow you to reduce your cost basis. For example, if you are planning to buy shares of Apple at $155, you can execute an options strategy, and get the same stock at a reduced price of, say $150. By using options, you can usually get 1-3% cost reduction for the underlying asset that you are trading. This in turn can help in improving your probability of success to more than 75%.

2. Increased Probability of Success

As seen earlier, trading a stock is a binary event and has a 50-50 chance of increasing or decreasing in value. The stock market is essentially a chaotic system. Even with fundamental and technical analysis, you cannot accurately predict a random event or external shock that impacts the market. Because options increase your probability of success by way of cost basis reduction, you give yourself better chances of being on the upside of these 50-50, or binary events. This is a significant edge that you are gaining. So, even though options could be directional trade, they can also be a market neutral trade. And, if you look at the Statistical Analysis, you will find that by trading small and trading often, and doing it over and over again, month after month, you will see an improvement in your portfolio compared to trading stocks alone.

3. Efficient Capital Leverage

It also allows you to leverage your capital. Consider an average trading account with $10,000. It can't buy a stock like Booking Holdings (formerly Priceline) (BKNG) that trade around $1,900, or can only buy one share and try to sell it for more than 10% of the account. Clearly, it's difficult to participate in great stock like Alphabet (GOOG), Amazon (AMZN), or Priceline. If a stock has underlying options, you can participate with options trades at a fraction of the stock price and provide greater leverage.

4. Limiting Risk

You can limit your risk with options as well. What's most frustrating to traders is when, even after being correct on the direction and timing of the market, they still sustain losses in an account due to short-term volatility. By trading options, you can limit your downside by allowing yourself to withstand Short-Term Volatility. You can sometimes have unlimited upside if you trade in options. In effect, options may give you limited loss and unlimited gains! The fundamentals of options trading are easy to learn too.

5a. Call Options

Introduction:

There are two types of options – calls and puts. Let's review calls first. A call gives you the *right to buy* an underlying asset at a certain price point in the future. Think of a house you're considering buying, which currently costs $250,000. You don't have money to buy at that price now, but you'll be able to afford it in 6 months. So, you tell the seller you can purchase the home in 6 months at the current price and he agrees. Wouldn't that be great!

This is essentially a Call Option. This strategy allows you to set a **Strike Price,** and exercise the right to buy underlying assets in the future at that price. You will also pay a premium to exercise this option. One call controls 100 shares and the price paid is the quoted price for the option, multiplied by 100.

In Figure 5, the x-axis shows the price of the underlying asset and y-axis is the profit/loss. The real value of the underlying asset, represented by the green line, is increasing as the price moves higher. The strike price is the value of the underlying asset at which we make the Call. In the case of our house- we called the value at $250,000 and this can be considered the breakeven line. Even if the real value of that house continues to rise, we exercise the right to buy it at $250,000 at a date of our choosing. With stock market assets, you'll often have many different strike prices to choose from when creating a contract so it is crucial to select the optimal price. Choosing the optimal expiration month is significant as well.

Similar to an insurance policy, an options contract has a time duration. Insurance policies are usually bought for one year- after which it expires and has to be renewed. Similarly, options too have to be renewed after they expire. However, an option can also be closed or offset any time prior to expiration. The breakeven point is the point at which x- axis meets y-axis. It's the point at which the price of the underlying asset meets profit/loss.
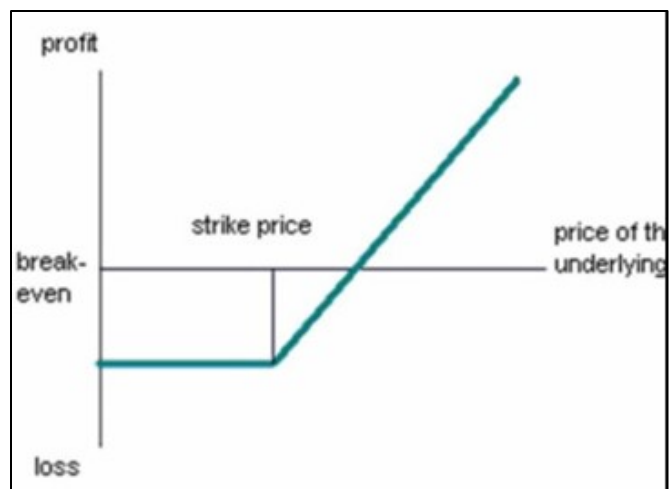
Figure 5

Call Attributes

There are a number of attributes or terms related to call options. We'll run through the most important terms here. Once you're familiar with these fundamental parts of an options contract, the rest will be easier to understand.

1. Strike Price

As you can see in the profit loss graph in Figure 6, you will have a limited loss at $200 and potentially unlimited gains once the stock goes above the $40 level. So, it is very important to select strike prices using predictive analytics or technical analysis. As shown in the graph, as time goes by between now and 6 months, your profit will fluctuate in the same way the underlying asset price fluctuates.
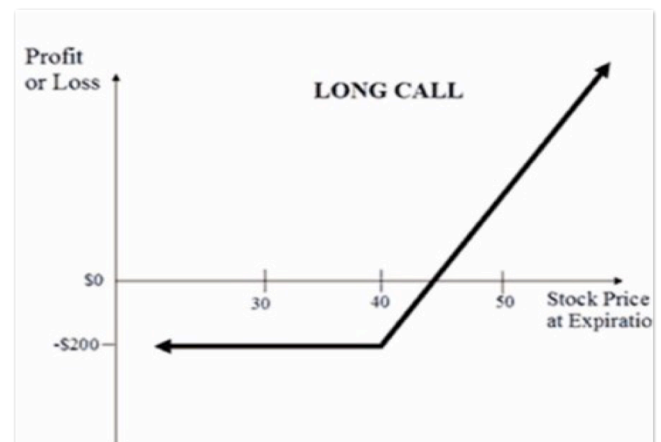
Figure 6

2. Expiration Month

Selecting the best Expiration Month is equally important as selecting an optimal Strike Price. Again, as you can see in Figure 6, the stock has to move from $40 to $50 by a specified time. If you are not correct on the time, you might not benefit from the upward movement of the underlying asset.

3. Premiums

You will need to be comfortable with the option price, or premium. Depending on how uncertainty is in the market may be having an affect on the underlying option will alter the premium. Options are derivatives, so the premium will rise when there is uncertainty in the market and fall when there is less uncertainty in the market. These concepts are covered in more detail in our chapters on **Implied Volatility.**

4. Assignment & Expiration

Assignment and Expiration are can sometimes result in losses. If you face Assignment on an option that you wrote or sold, especially if your contract is in-the-money, you might sustain substantial losses. Take caution and close your option contract prior to expiration or pay attention when the broker dealer assigns you on an option, which results in Short Stock (puts) or Long Stock (calls). Close the position as soon as possible in order to avoid losses. Expiration is also very important as this is where you might want to close the position because if you don't, the option can move similar to shares as you move closer to expiration.

5. **Moneyness**

The concept of moneyness is also important to understand. An option is either *In-The-Money, Out-of-The-Money* or *At-The-Money*. ATM calls have strike prices equal to the stock price. ITM calls have strike prices below the current stock price. Options with strike prices above the current stock price are OTM.

Points to Remember

- **Time Range Selection:** If the Stock does not move from $42 to $50 within the time you selected, your options will expire worthless. This is the same scenario of taking insurance on a house. If nothing happens to the house, which is actually a good thing, you will lose the premium you paid to the insurance company. Insurance companies are so profitable because most of the time nothing happens to the house and they are able to collect premium without having to pay anything.

- **Directional Bias:** In order to be a successful trader, you have to have Directional Bias. If you are buying a Call, you should have an Upward Directional Bias. You expect the stock to increase in value so that you can make money out of it, even though the exact extent of increase is unknown.

- **Volatility:** High Volatility means high uncertainty, which will typically means you pay high prices for options.

- **Leverage:** An average retail account in United States is $10,000. For such an account holder, it might be impossible to buy a stock like PriceLine that trade at $15,000. Options allow you to leverage capital and make such trades possible.

- **Risk vs. Probability of Success**: Keeping in mind these two aspects will make you a more experienced and confident trader. The higher the Probability of Success, the higher will be the risk involved. Once you get more experienced, you will learn to trade so that you have higher a Probability of Success, while at the same time able to aggressively defend your positions when a stock or market goes against you.

5b. Put Options

Introduction:

A put option gives the holder the right to sell an asset at a certain price within a specific period of time. Insurance is a classic example. If you buy insurance on a house worth $250,000 because you fear something happening to it, then you can buy an insurance policy to ensure that the value doesn't drop beyond a certain level. The premium paid to the insurance company to protect a drop in value below $250,000 is what we call a put. In the case of insurance, the time period is one yea and you will have to renew it each year.

As you can see from Figure 7, the profits and losses change as the price of the underlying moves higher and lower. The insurance or Put will go up if there is more uncertainty in the market, or if the underlying asset will go down in value. The price of the Put will go down if there is less uncertainty in the market or if the underlying asset increases in value.

Figure 7

Put Attributes

Similar to call options, there are a number of attributes or terms related to puts. We'll run through these looking through the lens of a put option.

1. Strike Price Selection

In the case of an insurance policy, the Strike Price is the value at which you want to sell your house in case of an event in the future.

2. Expiration Month

This determines the duration-in the case of insurance it is one year. For options it can be weekly, monthly or quarterly according to your convenience.

3. Premiums

You'll need to be comfortable with the option premium. You can use the binomial equation to determine the option price going into the future. For a put option, the price goes up when the underlying asset decreases in value, or the Implied Volatility increases, or the interest rate or dividends increases. All these attributes are figured in the binomial equation for determining the option price.

4. Assignment and Expiration

If you are assigned on a put that was sold and the price of the short stock rises suddenly, you will lose money. In Figure 7, x-axis represents the price of the underlying asset and the y-axis represents Profit/Loss. As the price of the underlying asset falls, your profit increases. But if the underlying asset price rises, you will lose money. If you own a put, the contract loses value over time (all else being equal) and the losses are limited to the premium paid. This is why it's important to keep track the expiration, as the option ceases to exist after it expires.

5. Moneyness

The concepts of *in-the-money, at-the-money,* or *out-of-the-money* apply to puts as well. An at-the-money put has a strike price equal to the stock price. An out-of-the-money put has a strike below the stock price. A put with a strike price above the stock price is ITM. Once you get more comfortable with these concepts and become a more experienced option trader, you will realize that selling out-of-the-money options makes more sense because the Probability of Success will increase and you can be correct 70-80% of the time.
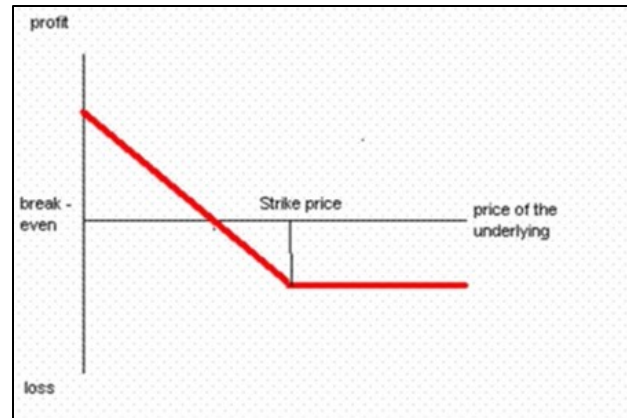
Points to Remember

- **Time Range Selection:** If you buy insurance on the house, it is for twelve months or one year. If you are trading in Apple earnings, and Apple earnings is going to happen in a month, you will have to trade in options that expire in more than a month's time.

- **Directional Bias:** You have to have a directional bias in order to be a successful trader. A put purchase represents a bearish directional bias on the underlying asset.

- **Volatility:** High Volatility means high uncertainty, which will mean you will have to pay higher premiums for options. You have to learn how Implied Volatility works for an underlying asset. If you are approaching a binary event and you have uncertainty in the underlying asset, the Implied Volatility will go up and so will the price of the put option.

- **Hedge:** You can use Puts as a hedge mechanism. Suppose you have an underlying Stock or an underlying house and you want to buy insurance, then you can purchase puts. One put hedges 100 shares.

- **Risk vs. Probability of Success:** As you get more experienced, you will realize that it makes more sense to sell out-of-the-money puts when you are bullish as this will reduce your cost basis and improve your Probability of Success. Also you will learn to be more proactive in defending your position when needed.

6. Core Principles

Introduction:

What are the Core Principles behind trading? Are there certain rules that successful investors follow? We'll outline the major points here, which are applicable to any type of trading strategy, from stock and options to futures. These elements are all important to consider when analyzing and are always included in our **Premium Membership Picks** service. This service is available with our Premium membership.

Principles

IV (Implied Volatility) Rank

Implied Volatility Rank shows you relative IV, that is, today's Implied Volatility versus that of the past 52 weeks. It gives an idea of whether to buy an option when cheap (when volatility is cheap), or to sell an option when expensive (when volatility is elevated).

Return on Capital (ROC)

Return on Capital helps you determine when to enter or exit a position. Make sure to calculate ROC prior to executing an order or getting into position. It determines at what point to exit the position. Buy and hold doesn't work well with options. So if you plan to enter a position by buying low and waiting to sell high, you have to know the exact point to exit the position.

Probability of Success (POS)

This shows you the Risk versus Return for you or the position. It is calculated using Tradespoon's **Probability Calculator**, showing the probability of stock being at a certain price level at a certain time.

Estimated Move (EM)

EM shows, with a high degree of mathematical certainty, at what range the stock is likely to trade by the time the trade recommendation or option expires. This is based on a voluminous amount of underlying data points analyzed by our neural networks. Options data shows demand and supply in the market for the specific options during the operation months, and hence can be used to determine the trading range of the underlying stock.

10-day Support & Resistance

As we can see in Figure 8, if today is April 23rd, we will show you what we think will the High and Low be for the next 10 days-that is for April 24th, 27th, 28th through May 7th. If you look at the lowest price point for the lows and the highest price point for the highs, it will tell you what the Price Range and Support/Resistance for the trade recommendation for the next 10 days, as seen in the example for Dow Chemical (DOW).

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Predicted Data. dow - Next 10 Days

Date	Open	Close	Low	High	Vector**	Strategy***
Apr 24, 2015	51.25	51.40	50.57	51.71	▲ +0.78%	Sell
Apr 27, 2015	51.00	51.09	49.82	51.50	▲ +0.03%	Hold
Apr 28, 2015	50.42	50.47	49.75	51.43	▼ -0.63%	Hold
Apr 29, 2015	50.15	50.07	49.89	51.26	▼ -0.97%	Hold
Apr 30, 2015	50.15	49.85	49.58	50.80	▼ -1.47%	Buy
May 01, 2015	50.82	50.33	50.03	51.35	▼ -0.41%	Hold
May 04, 2015	51.14	51.16	50.69	51.25	▲ +0.43%	Hold
May 05, 2015	50.83	51.39	50.28	51.96	▲ +0.54%	Hold
May 06, 2015	51.70	52.31	51.04	52.73	▲ +2.17%	Sell
May 07, 2015	51.79	51.85	50.96	52.64	▲ +1.91%	Hold
Accuracy, %*	98.79	98.85	98.25	98.83		

7. Calculating Risk

Introduction:

Tradespoon provides you with different tools to calculate risk. The **Probability Calculator** is one such tool. It helps determine the risk by showing you short-term Support and Resistance levels. It also shows the probability of a stock reaching a certain price point by the expiration date. The Probability Calculator is important for both stock and options traders, as it gives you a statistical analysis of the stock being at a certain price point with a 50-day time horizon.

One standard deviation in the Probability Calculator is really basic statistics. When trading options, you will often hear that you are looking for a 30% gain between the strike prices of a spread, or whatever strategy you are executing. You usually want 30% gain between the strike prices, which means you are looking for roughly 68% chance of being correct. Basic statistics is very important if you want to know the odds of the trade in order to be successful.

Historic vs Implied Volatility

Two other tools are **Historical Volatility** and **Implied Volatility**. Historical Volatility shows how the stock has behaved in the past and how volatile the stock has been over previous time frames like 20, 30, or 100 days. Historical Volatility is a measure of the volatility of the underlying. It can be thought of as the speed or rate of change of the underlying stock price or how often does the stock price change. The higher the Historical Volatility, the higher the rate of change and hence the more the risk involved with the underlying asset.

Implied Volatility predicts what the future performance of the underlying stock is going to be and can be used to predict where the Stock is going to be in future. Implied volatility is a function of an option price and is backed out from the price using a model or calculator. Implied Volatility shows you the expectations of future volatility and can be thought of as the uncertainty of the underlying asset. You can use different models, such as binomial model or binomial equation, to predict Implied Volatility based on premiums. You can also look at dividends and other attributes such as the interest rate.

As you approach earnings, Implied Volatility will expand due to the future expectation of what will happen to the underlying asset. In order to be a successful trader you have to study movements of Implied Volatility and learn how it changes between the earning seasons or between different binary events. You can learn more about charting these studies in our later sections covering volatility.

The most important concept that Tradespoon advocates on every trade recommendation is this: Higher return on capital means higher risk! By using the Probability Calculator, you can structure your trade accurately 80% of the time and you can be right 90% of the time by selling the out-of-the-money options. But this comes at the price of taking High Return on Capital. You have to be very aggressive in defending your position and in making sure that the trade doesn't go against you.

The Probability Calculator will show you the probability calculated of models and predicts stock prices based on the Options Expiration Cycle, which is very important to options traders. Probability Calculator will show Support and Resistance prediction for the next 50 days. If you are a weekly trader, you will be shown the Support and Resistance for the next 5 or 10 days. It will also show a Trend value, and a Buy/Sell Rating, which shows the probability of the stocks being higher or lower and how predictable the stock behavior is based on our neural network analysis.

Figure 9B – Probability Calculator
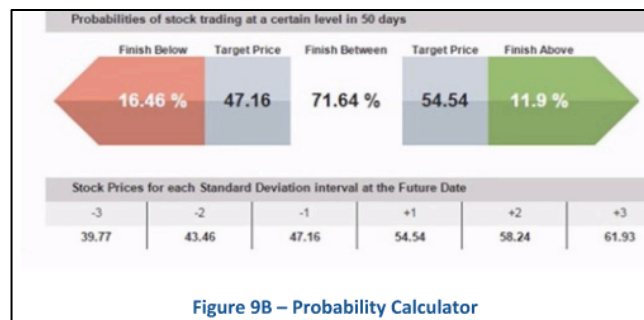
In Figure 9B, the probability of DOW being higher than $54.54 is only 11.9 %, which means roughly 11% of the time you will be correct if you buy 55 strike call. This is not the best strategy if you are bullish on DOW. You might be better off by paying more and buying 45 call option because there is a 71.64% probability of Dow Chemical being between 47.16 and 54.54 in the next 50 days. Also, you want to compare the Historical Volatility for the past 50 days with the Implied Volatility of the future and see if there is a discrepancy and what is happening in the underlying asset.

When a certain event happens, you tend to do it over and over again, like rolling two dices in which there is a higher probability of landing a 5, 7 or an 8. In the same way, if you trade options over and over again, the 1 standard deviation of the stock being between certain points will be higher.

1 Standard Deviation for options helps determine Support and Resistance of the underlying stock based on Implied Volatility or Historical Volatility. 1 Standard Deviation can be defined as having a 68% probability of the stock reaching Strike Price (μ) by a certain date. So, (μ-1) is 1 Standard Deviation. (μ-2) is 2 standard deviations and, which means 95% of the time stock will be between the two key Price Points. Bollinger Bands is another technical indicator that you can use to make this prediction.

8. Picking the Best Strike Price

Introduction:

Time Range Selection is important when picking the right options with the optimal strike prices because the profit often hinges on the stock reaching the strike of the option by certain time. Our Probability Calculator helps determine the optimal strike prices for placing options trades. Figure 10 shows that the target price for Dow Chemical is $47.16.

Probability Calculator for Dow Chemical

On the other hand, if you are bullish on the stock, you can see the probability of the stock reaching $54.54. If there is a 71.64% probability of a stock reaching $54.54, and you are also bullish based on our Trend Rating at a 9 and Long-term Rating at 8, then you can consider buying a $47 call option. The Strike Price selected would then be $47.

What if you are bearish on the stock? You might buy a $55 put option because you know that there is a 71.64% probability of the stock being between $47.16 and $54.54. Tradespoon's recommendation services also send you daily and weekly trade ideas that include the estimated move of the underlying asset and the expected price of the stock for varying time horizons. Tradespoon's tools can show predictions of where the stock is going to be on the next day, the next 5 days, or the next 50 days, for example.

A Directional Bias, whether Bullish or Bearish, is important while keeping an eye on volatility. Normally, higher volatility correlates with higher options premiums and that will also help determine your Strike Price selection. Technical Analysis or Tradespoon Predictive Analytics take into consideration and help with better quantifying Risk, Volatility, and Strike Price Selection.
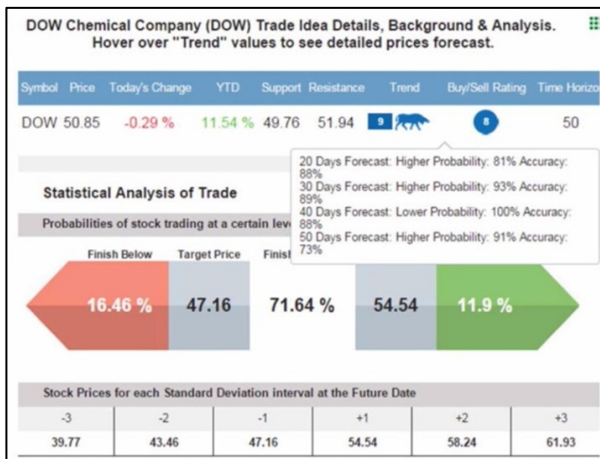

Figure 10

9. Choosing the Right Expiration Date

Introduction:

Expiration Date is one of the most important factors to consider when trading options. Expiration Date for options, just like Strike Price discussed in the previous section, is a derivative of the underlying assets. That is, you have to be correct on the direction of the underlying asset by a specific expiration date. For example, while buying an insurance on the house, the time period is usually for one year and that is the expiration date. Essentially, Expiration Date is the final moment that an option and, after that, it expires or ceases to exist. So, it is important to know when to close out an option or when to let it expire.

Using the Probability Calculator & Statistical Analysis

When you look at the Probability Calculator and Statistical Analysis, you will notice that the best options to trade are monthly options, as they are more conservative in nature. If you use a neural network and other predictive analytics, the longer time you are allowing yourself, the more time you have to be correct of the direction of the market and the direction of the underlying stock.

The Probability Calculator in Figure 10 (previous chapter) shows the estimated move that Dow Chemical is going to make, the support and resistance slides, and the results of Tradespoon's algorithmic model results for a period of 50 days. Two very important aspects shown here are Trend and Buy/Sell Rating. The Trend value of 9 means that we are bullish on Dow Chemical to outperform the S&P 500 in a 20-50 day time horizon. A Buy/Sell Rate of 8 indicates a very favorable risk/reward outlook for the long-term, according to our technical and fundamental analysis. Thus, as shown we can use the Probability Calculator to predict where the stock is heading during a certain time frame. Time Horizon is an important factor in this analysis.

In order to be successful and benefit from options trading, you have to be correct on both time selection and direction. Tradespoon will provide you analytics for predicting stock movements into the future. In Figure 11, you see both a ten day prediction and six months prediction. It shows where a stock or an option that you are trading is heading. In this particular example, you will see that the stock prices for Dow Chemical are going up. Keep in mind Volatility also impacts the timeframe that you are trading.

Lastly, be aware of the difference between Short-Term Prediction and Long-Term Prediction. Some of our models are more accurate for short-term trading, while others like Tradespoon Ideas Bulls and Bears, are more accurate in predicting long-term stock prices. Match the strike prices and expiration months that offer the best risk/rewards given the timeframe being considered.

Section II

Advanced Options Strategies

The first section of this book covered the basics of options trading an highlighted some of the tools available to Tradespoon subscribers, like the Probability Calculator, the Stock Forecasting Tool, and the Premium Stock & Options Picks service. Now it's time to roll up our sleeves and dig into more advanced options material. We cover simple and advanced strategies, volatility, earnings plays, and unusual options activity scanners. The final section delves into technical analysis, chart patterns, trade psychology, and portfolio management.

10. Bull Call Spreads

Introduction:

A Bull Call Spread involves buying a call option and selling a call option with a higher strike within the same expiration month.

Key Concepts

• **Cost Basis Reduction:** Call Spread allows Cost Basis Reduction. This is the main reason why you want to trade verticals (spreads with different strike prices in the same expiration term).

• **Moderate Upward Movement:** It is executed when the general feeling towards an asset is positive and a moderate upward movement is expected. Suppose you are bullish on the Stock and expect it to move upwards but not in a rapid fashion, then you can trade Debit Call Spread.

• **Low Risk, Low Reward and Lower Requirements**: Debit Call Spread involves low Risk, has low Requirements and will provide low Reward.

• **Exchanging upside potential for chance to recover premium:** This higher Probability of Success compared to Long Calls is the most important aspect of Debit Call Spread. Here you will not only have a cost basis reduction, but also a higher Probability of Success compared to trading Calls.

When you start trading options, you might be able to trade only in Puts and Calls as your broker or dealer might not give you enough rights to trade vertical spreads. But once you get more experienced and understand the concept of Probability of Success, you can ascribe for Cost Basis Reduction as you are buying calls and selling out-of-the-money calls in Debit Call Spread. By selling OTM calls with higher Strike Price Call, you can reduce the cost basis compared to when buying a call outright. And by reducing the cost basis, you can increase the probability of being correct.

Set Up

• Buy In-The-Money (ITM) Call Option with lower Strike Price, because you have a bullish bias for an underlying asset.

• Sell Out-of-the-Money (OTM) Call Option with a higher Strike Price

• Use the same underlying asset and the same contract Expiration Date based on forecast accuracy. You have to pick an Expiration Date that gives you the highest chance of success. Based on our research at Tradespoon, the best duration for Option contract is between 50-75 days. In order to achieve higher Probability of Success with options, you want to pick 50-75 days till expiration. This will afford you more time to be correct on your bias for the stock.

• Select Strike Prices based on Probability of Success, and Tradespoon Analytics such as Probability Calculator or Stock Forecast Tool.

Example

In **Figure 13**, x-axis denotes the Stock Price and y-axis denotes the Profit/Loss. Point A denotes the buying price and Point B denotes the selling price, which are the Strike Price selections. The Expiration Month is again 50-75 days. Maximum Loss will occur at Point A, meaning that if you are wrong and the stock drops to lower than point A, you will lose money. Maximum Gain occurs at Point B. The Breakeven Point is the Debit Price you paid and is indicated by the point where the blue line intercepts the x-axis. This example is of a directional trade with bullish bias.
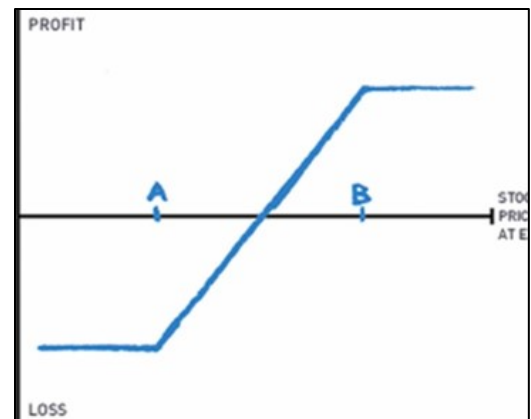
Figure 13- Bullish Call Spread

Return on Capital
ROC determines when you enter and exit a position.

• You pay the cost of the Long Call (ITM Option) and earn proceeds from the sale of the Short Call (OTM Option)

• Total trading costs is the difference between the amounts paid and earned under maximum risk.

• Maximum Gain is the difference between the two Strike Prices (B-A) minus the original Debit paid.

• Maximum Loss will be the original Debit paid which is the sum of (A) and the premium paid for the Debit Spread.

• Breakeven Point is the position where maximum loss can occur and is at the point of intersection of the blue line on the x-axis.

11. Bull Put Spreads

Introduction:

A Bull Put Spread involves selling a put and buying a put with a lower strike price within the same exipration month.

Key Concepts

• **Cost Basis Reduction:** Put Spread also allows Cost Basis Reduction.

• **Moderate Upward Movement**: It too is executed when the general feeling towards an asset is positive and a moderate upward movement is expected.

• **Low Risk, Low Reward and Lower Requirements:** Again Debit Put Spread too involves low Risk, has low Requirements and will provide low Reward.

• **Exchanging Upside Potential For Chance to Recover Premium:** There is higher Probability of Success compared to Long Calls, similar to Debit Call Spread. Here you will not only have a cost basis reduction, but also a higher Probability of Success in trading Calls.

Note: If you have a bullish bias and want to reduce the Cost Basis, you will have to execute a Credit Put Spread.

Set Up

• Sell At-The-Money (ATM) Put Option with a higher Strike Price.

• Buy Out-of-the-Money (OTM) Put Option as a hedge.

• Use the same underlying asset and contract Expiration Date based on forecast accuracy.

• Select Strike Prices based on Probability of Success, and Tradespoon's analytics.

Return on Capital

• With Bull Put Spreads, you pay the cost of the Long Put (OTM Option) and you earn proceeds from the sale of Short Put Option (ATM Option).

• Capital required is the difference between the Strike Prices minus premium received.

• Maximum Gain occurs on reaching the higher Strike Price and is limited to the premium received.

• Maximum Loss is the difference between the Strike Prices minus the premium received.

• Break Even Point is the point of intersection of the blue line on the x-axis

Example

The Profit and Loss graph for both Bullish Debit Call Spread and Bullish Credit Put Spread are identical; the x-axis denotes the Stock Price and y-axis denotes the Profit/Loss. Point A denotes the buying price and Point B denotes the selling price, which are the Strike Price selections. The Expiration Month is again 50-75 days. Maximum Loss will occur at Point A, meaning that if you are wrong and the stock sells off lower than point A, you will lose money. Maximum Gain will occur at Point B. The Break Even Point is the Debit Price you paid and is indicated by the point where the blue line intercepts the x-axis. This example is of a directional trade with bullish bias.
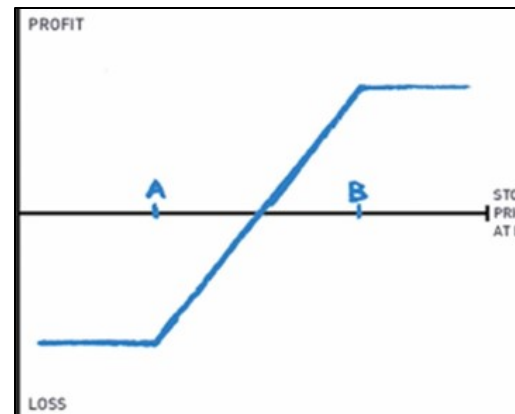

Figure 14- Bull Put Spread

12. Bear Call Spreads

Introduction:

A Credit Call Spread involves selling a call and buying a call with a higher strike price within the same expiration month

Key Concepts

• **Cost Basis Reduction:** Bearish Call Spreads also allows Cost Basis Reduction.

• **Moderate Downward Movement**: It is executed when the general feeling towards an asset is negative and a moderate downward movement is expected.

• **Low Risk, Low Reward and Lower Requirements:** Credit Call Spreads involve low Risk, has low Requirements and will provide low Reward.

• **Exchanging Downside Potential For Chance to Recover Premium:** The higher Probability of Success compared to Long Puts is the most important aspect of Credit Call Spreads.

Note: If you have a bullish bias, you may be able to buy a Put, but by executing Credit Call Spreads, you can also reduce your cost basis and thus improve Probability of Success.

Set Up

• Sell In-The-Money (ITM) Call Option with a lower Strike Price.

• Buy Out-of-the-Money (OTM) Call Option with higher Strike Price.

• Use the same underlying asset and contract Expiration Date based on forecast accuracy.

• Select Strike Prices based on Probability of Success and Tradespoon's analytics.

Return on Capital

• With Bear Call Spreads, you pay the cost of the Long Call (OTM Option) and you earn proceeds from the sale of Short Call Option (ITM Option).

• Total trading cost is the difference between the Strike Prices and the original amount earned at maximum Risk.

• Maximum Gain is limited to the original proceeds.

• Maximum Loss is the difference between the two Strike Prices minus the original Credit you receive.

• Break Even Point is the middle point between the two Strike Prices where the blue line intercepts the x-axis.

Example

In Figure 15, x-axis denotes the stock price and y-axis denotes the Profit/Loss. Point B denotes the buying price and Point A denotes the selling price, which are the Strike Price selections. The Expiration Month is again 50-75 days. So, Maximum Loss will occur at Point B, meaning that if you are wrong and the stock sells off lower than point A, you will lose money. Maximum Gain will occur at Point A. The break-even point is between Point A and B where blue line intercepts the x-axis. This example is of a directional trade with bearish bias.
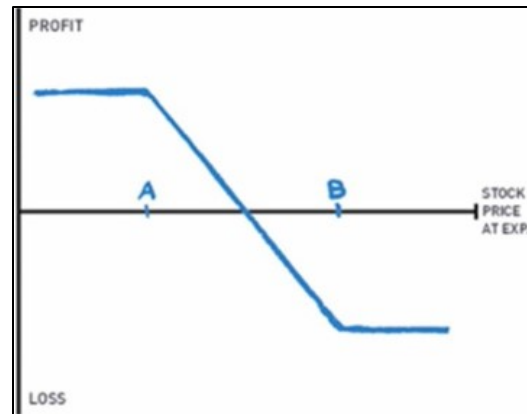
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Figure 15- Bear Call Spread

13. Bear Put Spreads

Introduction:

A Bear Put Spread involves buying a put option and selling a put option with a lower strike within the same expiration month.

Key Concepts

• **Cost Basis Reduction:** Bearish Put Spreads also allows Cost Basis Reduction.

• **Moderate Downward Movement**: It is executed when the general feeling towards an asset is negative and a moderate downward movement is expected.

• **Low Risk, Low Reward and Lower Requirements:** Debit Put Spreads involve low Risk, low Requirements and will provide low Reward. This allows you to participate in more expensive stocks.

• **Exchanging Upside Potential For Chance to Recover Premium:** There will be a higher Probability of Success compared to Long Puts. This makes sense as you are selling OTM puts, thus reducing the Capital Requirements and cost basis, and increasing the Probability of Success.

Set Up

• Sell Out-of-the-Money (OTM) Put Option with a lower Strike Price.

• Buy In-the-Money (ITM) Put Option with higher Strike Price.

• Use the same underlying asset and contract Expiration Date based on forecast accuracy.

• Select Strike Prices based on Probability of Success and Tradespoon's analytics.

Return on Capital

• With Bear Put Spreads, you pay the cost of the Long Put (ATM Option) and you earn proceeds from the sale of Short Put Option (OTM Option).

• Capital Required is the original Debit paid for the Spread.

• Maximum Gain is the difference between the two Strike Prices minus the original Debit paid.

• Maximum Loss is the original Debit paid.

• Break Even Point depends on how much premium you paid for the Spread, and will be somewhere between the Strike Prices where the blue line intercepts the x-axis.

Example

In Figure 16, the x-axis denotes the Stock Price and y-axis denotes the Profit/Loss. Point B denotes the buying price and Point A denotes the selling price, which are the Strike Price selections. The Expiration Month is again 50-75 days. So, Maximum Gain will occur at Point A and Maximum Loss will occur at Point B. The Break Even Point is between Point A and B and depends on how much Debit you paid. This is a directional trade with a bearish bias.
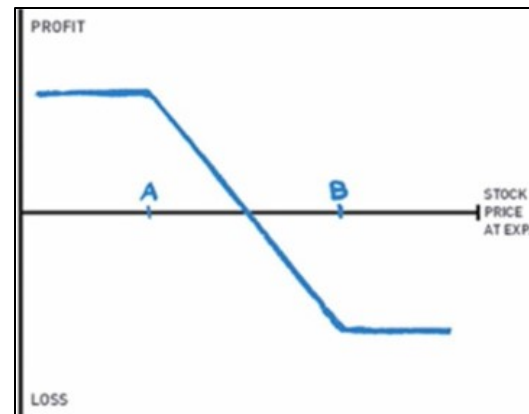
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Figure 16- Bear Put Spread

14. Butterfly Spreads

Introduction:

The most important advantage of a Butterfly is that it allows further Cost Basis Reduction. Butterfly Spreads are traditionally done with either all Calls or all Puts, and involve three Strikes Prices for each spread. The strategy is named after the concept that one of these Short/Long Strikes makes up the body and the other 2 Long/Short Strikes makes up the wings to form a Butterfly. An important criteria for the strategy is that the Expiration months and increments between Strike Prices for all Options should be the same.

Set Up

• Sell two ATM Call Options with a middle strike price.

• Buy one OTM Call Option with a higher strike price.

• Buy one ITM Call Option with a lower strike price.

• Use the same underlying asset and the same contract Expiration Date based on forecast accuracy.

For the purpose of set up, you can think of the Butterfly as two Spreads- a Debit Spread and a Credit Spread. Or better still- a Debit Spread where the Long Call is a lower strike price and a Credit Spread where the Long Call is a higher strike price.

Key Takeaways

• Market Outlook is directional to the Short Strike that constitutes the body. Even though Butterfly is a market neutral strategy, you can use Tradespoon's forecasts and analytics to find where the Stock will be gravitating towards by the Expiration Date. It is a perfect strategy-especially if there is no binary event.

• The Risk is limited on both the Upside and Downside.

• The Reward is also limited.

• It is a Debit Strategy and has a reduces Cost Basis

• Always review the Implied Volatility Rank to know when to execute the strategy.

• It is a great strategy, particularly after earnings when you have a low Implied Volatility Rank.

• Always use the Stock Forecast Tool to find the optimal middle Strike Price.

Example

To select a Strike Price you have to identify where the stock is gravitating towards by the selected Expiration Month. As you can see in the Profit/Loss Calculator given below, the maximum profit is when you are reaching the Short Strike Price. So, the peak of the profit and loss is the middle Strike Price where the Short Strike is. The wings are in-the-money and out-of-the-money calls. Maximum loss occurs when the price drops either below the Lower Strike Price or when it moves above the Higher Strike Price. The Breakeven Points are the two points where the Strike Price intersects the x-axis.
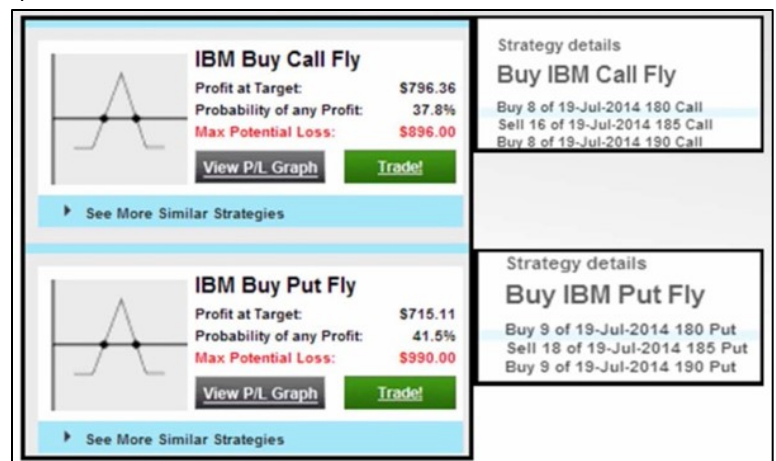

Figure 17- Butterfly Spread Risk Graph

Always keep in mind that even though the Butterfly is market neutral strategy, where you just have to make sure that the Strike Price does not move below or above the Long Strikes, it can also be executed as a directional trade if the body of the fly is significantly above or below the currently underlying asset price.

15. Condors

Introduction:

Condor is a neutral strategy in which you use all Calls or all Puts at different Strikes but having the same Expiration Dates. Similar to Butterfly strategy, Condor also allows further Cost Basis Reduction. When you combine a Bear Call and a Bull Put Spread together in a single Spread, it is called an Iron Condor. The Expiration months and increments between the Strike Prices for all options should be the same for a Condor. So if you are doing an Iron Condor with Short Call and Short Put Spreads, the distance between the Strike Prices for the Calls and Puts should be the same, and so should be the Expiration months.

Set Up

• Sell an ATM Call Options and Sell an ATM Put Option.

• Buy one OTM Call Option and one OTM Put Option to hedge yourself if the stock moves erratically to the Upside or Downside.

• Use the same underlying asset and the same contract Expiration Date based on forecast accuracy.

• Select Strike Prices based on Probability of Success and Tradespoon's analytics. Always review the Implied Volatility Rank.

Key Takeaways

• The market outlook is sideways to neutral.

• The Risk is limited by the Option you purchase. Reward is also limited.

• To be profitable, the stock must close between the Short Strike Prices at Expiration. But since you are selling the Credit, you need to do it when the Implied Volatility is elevated.

• Typically, you will have lower profits and higher probabilities because you are collecting Credits on both sides of the Call Spread and Put Spread.

• It is a Credit Strategy where you are receiving the premium.

• You should review the Implied Volatility Rank.

• Always use the Stock Forecast Tool to find the optimal middle Strike Prices and to gauge where the stock is gravitating towards.

Example

Let's go through a specific example for which the Profit/ Loss Chart is given below. As you can see the Expiration Month is the same for all-October. Maximum loss will occur if the stock makes a rapid movement to the Downside and drops below 31, or make a rapid movement to the Up- side and goes above 47. Max Gain will happen in between these two Short Strike Prices, which is from 32 to 46. Break Even Point is Credit you have received for the Spread and is the point where the x-axis intercepts the Profit/Loss graph. Also keep in mind that this is a market neutral strategy and since you are doing 2 Credit Spreads, you will benefit from an increase in Implied Volatility.

Figure 18- Condor Spread

16. Calendar Spreads

Introduction:

Time-based spreads such as Calendar Spreads or Diagonal Spreads help you buy options with more time until Expiration (Back Month options) and sell options with less time until Expiration (Front Month Options). Time Spreads take advantage of different Expiration Months, Implied Volatility and Time Decay. Selling and buying different months allows you to take advantage of Front Month Time Decay and Back Month Volatility. For example: in a Short Option, the Front Month will have a higher rate of decay than the Back Month, and will have a different Implied Volatility. It also allows you to spread your Risk over multiple months rather than have it all in the same month as in Verticals. This gives you more time to be correct on your strategy.

Set Up

• Sell an ATM Call or Put Option Front Month.

• Buy the same Strike Call Back Month Option

• Use the same underlying asset but different contract Expiration Date based on forecast accuracy. Since you are using the same underlying asset, the key is to get the timing correct. The optimal time till Expiration for Back Months is between 50 to 75 days. Optimal Front Month Expiration is between 20 to 40 days.

• Select Strike Prices based on Probability of Success and Tradespoon's analytics.

• Always keep in mind that it is a Debit Strategy and you are paying money up front.

Key Takeaways

• **Expiration**: Calendars are buying strategies and hence you should sell the Front Month Options with approximately 20 to 50 days' worth of time and buy the Back Month Option with 50 to 150 days' worth of time.

• **Strike selection**: Your maximum gain on a Calendar Spread occurs when the price on Expiration day closes right at the Short Strike. When selecting a Strike to sell, you must contemplate where you anticipate the stock closing at Expiration. The advantage of Calendar Spreads is that you needn't be 100% correct in this analysis, but it does pay off when you are!

Example

In the example graph given, you will notice that the maximum Gain you are getting is the Strike Price of your Short and Long Option. So any rapid movement to the Upside or Downside away from the Strikes will lead to heavy losses. Here the maximum Loss will happen at 39 and 45 and the maximum Gain happens at 42. So, if you want to give yourself more time and take advantage of the time decay, especially when the Implied Volatility of the Front Month has jumped due to uncertainty in the market, then you have to execute this market neutral strategy with the hope that the Implied Volatility of the Front Months will decay and revert to its mean.
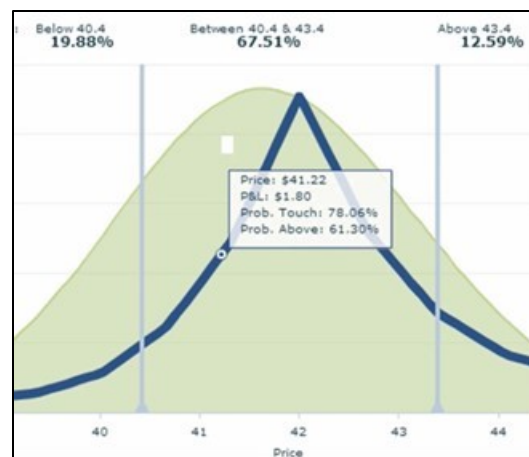
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Figure 19- Calendar Spread

17. Selecting the Right Strategy

Introduction:

To be successful, you want to know what to trade, know the direction of the market and the direction of the underlying asset that you're are trading. You have to be comfortable with the stock and learn how it trades from one cycle to another and then you have to figure out the most optimal strategy that gives you highest Probability of Success.

Risk and Probability of Success

Statistically speaking, the strategy with the highest Cost Basis Reduction gives you the highest Probability of Success. The further away you are selling your Strikes from where the underlying stock is trading, the higher will the Probability of Success and hence the better the Strategy. So, buying Puts and Calls is a strategy with low Probability of Success. This is probably one of the reason why most option traders lose money when they begin trading, as they are having to pay too much premium for these Puts and Calls when Implied Volatility is high.

Higher Risk Strategies

On the other hand, selling Naked Puts and Calls has a high Probability of Success, involves higher Risk, but gives you the best results when there is a lot of uncertainty in the market. When Implied Volatility is relatively high, selling Naked Puts and Calls makes sense because you will get more premium for the options. But since they also present lot of risk, it is best to find a more suitable middle ground strategy. Vertical Spreads, Calendar Spreads, Condors are all such conservative strategies with high Probability of Success, but with the lowest amount of Risk.

The Right Strategy

The right strategy is be more conservative in the beginning, and once you get more experienced with a better understanding of Probability of Success and how to defend your position aggressively, then you can start doing the more complicated strategies such as Flies, Spreads and Iron Condors.

Using Tradespoon's tools

Tradespoon provides you with trade customizing tools such as **TradeBuilder-** depicted in Figure 20. TradeBuilder allows you to select a trigger, the time horizon, the amount of money you want to invest and the Probability of Success you want to pursue. It will then recommend the Optimal Strategy with the highest probability of profit. Always target a Probability of Success with 60%-80% and refer to Tradespoon's Short-term Trend rating. Reducing the Cost Basis by setting out of the money spreads is the optimal strategy.
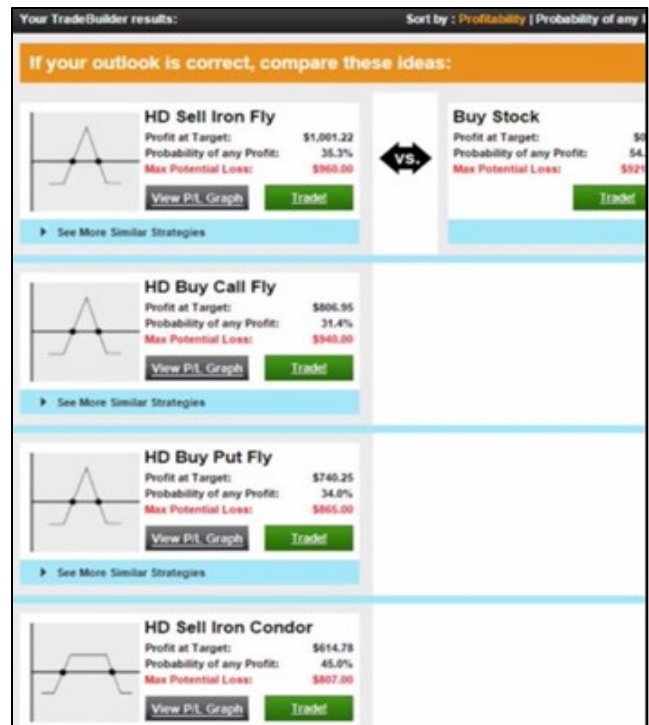

Figure 20- Calendar Spread

18. Trading on Earnings

Introduction:

During Earnings, traditional market makers will take advantage of the discrepancy between what the market thinks the stock will do at the Earnings date, and what the actual movements of the stock will be. If there is a discrepancy between the perceptions of Implied Volatility versus the actual Implied Volatility, then they can take advantage.

When there is too much uncertainty in the market, market makers sell Volatility with the idea that the market will revert to itself, and so will the Implied Volatility, and hence the stock. Traditionally, market makers do not have a directional bias, but instead they build a market neutral strategy and sell Volatility on both the Bullish side and Bearish side of the stock. At Tradespoon, we believe in directional bias and provide you with Short Term and Long Term scores. So let's go to some of these examples.

Seasonal Charts

Tradespoon provides you with a Seasonal Chart that shows binary events such as Earnings from a historical perspective, and helps you to learn how the stocks behave before Earnings and after Earnings. Seasonal Chart also shows the future price movements and how the current price movements correlate to the historic information.

Tradespoon Bulls

The Tradespoon Bulls tool shows the directional bias, though not on all the stocks, but the ones that are the most predictable and follow a common pattern. If you pick 'Earnings with 20 days' as the selection criteria, we will show you stocks with high IV Rank that have Earnings within the next 20 days and also give you the directional bias on those stocks.

Points to Remember

Do note that you sell OTM Options when the IV Rank is high and Tradespoon Score is greater than 9. Also keep in mind that most Optimal Strategies are either Calendar Spreads or Credit Spreads.

Always close your Long Term positions before earnings or if you are still bullish on the stock, roll positions with high POS. Follow these same rules for POS V/S ROC and try to collect 30% the width of the Strikes, as this is usually Δ70 or Δ80, and that is what you want to look for when selling the options.

The Right Strategy

The right strategy is be more conservative in the beginning, and once you get more experienced with a better understanding of Probability of Success and how to defend your position aggressively, then you can start doing the more complicated strategies such as Flies, Spreads and Iron Condors.

Finding the Right Strategy

To find the most Optimal Strategy, use the TradeBuilder to enter the ticker and the time horizon, and it will recommend the most Optimal Strategy. It is always ideal to target 60%-80% POS. If you are selling Puts, this means Δ20 or Δ30 for Short Puts and Δ70 and Δ80 for Long Puts. Use the Tradespoon Short Term trend to deal with directional bias, that is, to analyze whether the stock is going up, down or continue to trade sideways. And again reduce your Cost Basis by selling OTM Option Spreads.

19. Volatility Rank

Introduction:

Our trade recommendation services provide signals based on various analytics, including Implied Volatility. To be a successful trader, you have to study the IV Chart and IV movements which can be found in our Virtual Trading tool.

IV Rank or Implied Volatility Rank is calculated by dividing the difference of today's IV value and the lowest IV value in the past 52 weeks by the difference of the highest IV value and the lowest IV value in the past 52 weeks.

IV Rank = (Current IV – LowIV)/(HighIV – Low IV).

	☑ Stock Price	☑ Historical Volatility	☑ Implied Volatilit
Last	50.56	12.28	11
High	50.56	18.90	20
Low	34.00	9.88	8

In this example. It can be calculated as (11-8)/(20-8)=25%

IV Rank and Options

One of the most common questions we are asked at Tradespoon is, "Do you buy Debit Call Spreads or Credit Put Spreads?" The method we follow is quite simple-when the IV Rank is low (less than 50%), then you buy Options. When the IV Rank is high (greater than 50%), then you sell options. For this we constantly study the Implied Volatility of the underlying asset and apply the same technique regardless of whether we are doing Iron Condor, Credit Call Spreads, Credit Put Spreads or something else.
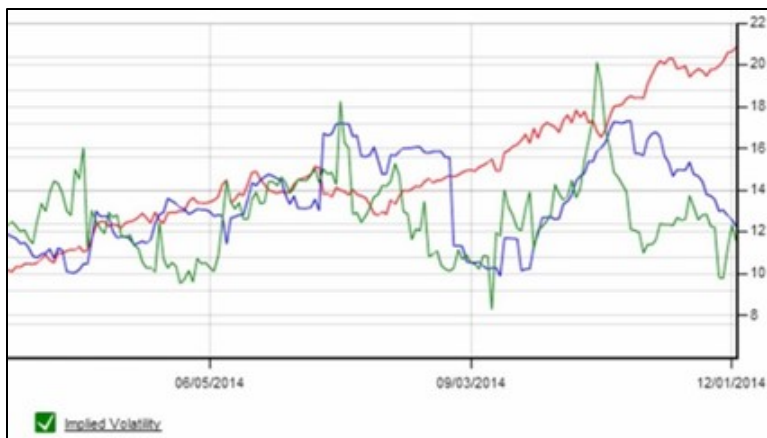
Figure 23- IV and HV Chart

Look at the 52-week chart of Implied Volatility. As a rule of thumb, buy when the IV Rank is low and sell when the IV Rank is high. In Figure 23, IV Rank is depicted by the green line, the troughs of the mountains indicate a low IV Rank and the peaks indicate a high IV Rank. This is what determines whether you are doing a Credit Strategy or a Debit Strategy.

Always keep in mind the concept of Probability of Success versus Risk. High Probability of Success means that you are taking high risk and hence the Return on Capital will be low. This is a good strategy to execute when the IV Rank is high. Low Probability of Success means that the risk involved is low and hence the Return on Capital will be high. This is best done when the options are cheap and the Implied Volatility is low. As you get more comfortable with Return on Capital, you will start structuring your trades with high Probability of Success and high Implied Volatility.

20. Historical & Implied Volatility

Introduction:

Tradespoon's technology bases its predictive analytics based on Statistical Analysis in order to serve our traders. In this section, we will discuss the Historical Volatility versus the Implied Volatility, and why it is important in Statistical Analysis. We will also look at how Historical Volatility and Implied Volatility are affected by Standard Deviation, Bell Shaped Curve and Probability Analysis.

Historical Volatility

Historical Volatility can be defined as the realized Volatility of a financial instrument over a given time period. Generally, this measure is calculated by determining the average deviation from the average price of a financial instrument in the given time period. Historical Volatility shows you the measure of underlying asset changes in the past.

Implied Volatility

Implied Volatility is computed using a model and can be defined as the estimated volatility of a security's price. It is determined by the underlying options data that will expire in the future. This means that the Implied Volatility shows you a glance into the future.

Note the Bell Shaped Curve graph in Figure 24A for rolling two die. Historical Volatility, or Historical Statistical Analysis, will show you that you will get seven almost 70% of the time and you will get either a six or an eight 40% of the time. When predicting, you will know that six, seven or eight will come out more often. In the same way you can also trade options. Certain strike prices by certain expiration dates will come out more often than the others.

Furthering this concept: based on the 1 Standard Deviation for options in the Probability Calculator, you can see that certain Strike Prices such as the μ depicted here will come out 68% of the time. Based on Historical Data or Implied Volatility, this means that a certain stock will move to a certain stock price by the expiration date 68% of the time. 1 Standard Deviation of 68% Probability for stock reaching Strike Price μ by certain date.
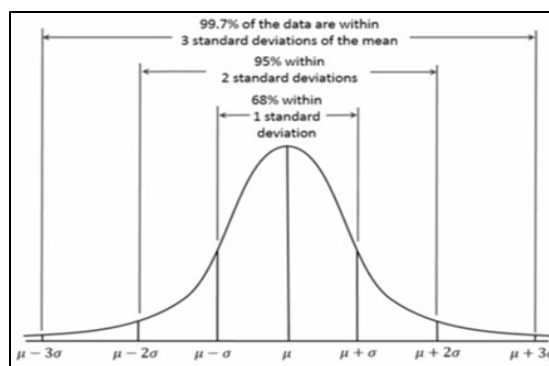
Figure 24a- Bell-shaped Curves
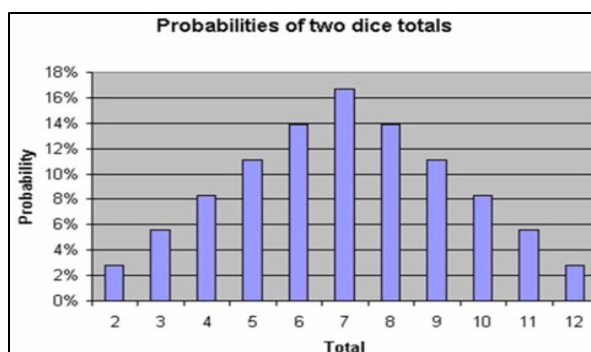
Figure 24b- Bell-shaped Curves

Using the Probability Calculator

Our Probability Calculator provides support and resistance based on Standard Deviation Analysis, as well as the trend, which gives you the directional bias. The top part of the Probability Calculator is based on Implied Volatility and the bottom part is based on Historical Volatility analysis. In Figure 24C, the Support is $49.76 and $51.94 and the Trend is predicted as 9 and 8.
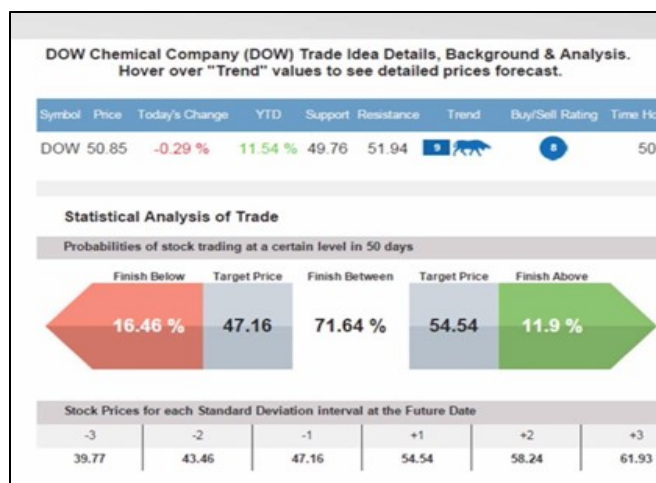
Figure 24c- Bell-shaped Curves

21. Volatility Skew

Introduction:

We already know that the Volatility is the uncertainty in the market and that higher the uncertainty, the more likely it is for the stock to move on a daily basis. We also know that Implied Volatility will be elevated before earnings and it will go down after earnings.

Figure 26 depicts the Implied Volatility for OTM Puts versus OTM Calls. If the stock is trading at $45.43, then the two OTM Puts are 33 and 24 when the Implied Volatility is elevated. For January, the Implied Volatility is at 87-80 level, but for the same Expiration months, the Implied Volatility for OTM Calls is much lower. This is what Volatility Skew means. For the same equidistant price from where the underlying stock is trading, OTM Puts have much higher demand than OTM Calls, meaning that their Implied Volatility is elevated.
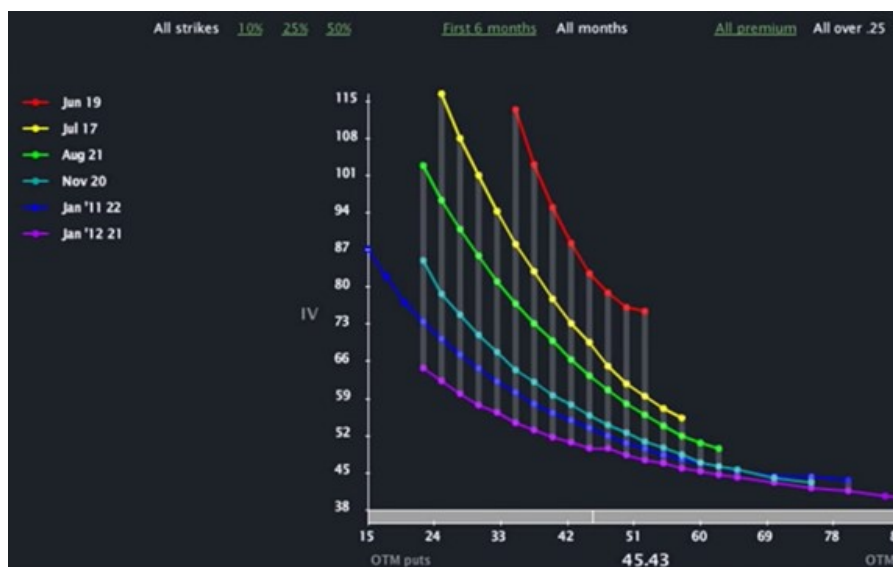
Figure 26- Vol. Skew for OTM Puts and Calls

You can also see that the Front Months Implied Volatility versus the Back Months Implied Volatility is also different. The Implied Volatility for August is higher than the Implied Volatility for November, and the Implied Volatility for June is higher than that of July. This is due to some kind of binary events that are happening in the market. It's important to understand the existence of Volatility Skew: that there can be higher demand for OTM Puts than OTM Calls, or that the Implied Volatility for the Front Months can be higher than the Implied Volatility for the Back Months.

Approach

• Often, higher demand for Puts indicate that there is a higher difference in Volatility. This means that even if the market sells off, there will be more demand for the Puts and hence the Implied Volatility for Puts will be higher.

• Large horizontal Volatility Skew between two months allows you to create strategies such as Calendar Spreads that benefit from time decay.

• The Implied Volatility in a Front Month is outsized to the movement due to binary events such as earnings.

• Calendar Spreads are buying strategies that are beneficial when the Implied Volatility is lower and Options are relatively cheaper.

• This provides an opportunity to buy options at a cheaper price and take advantage of Volatility potentially increasing thereafter.

• When trading Calendar Spreads, you benefit if the Implied Volatility rises.

22. Time Skew

Introduction:

Figure 27 shows implied volatility for OTM Puts and OTM Calls, you will notice that Implied Volatility for Front Months can be higher than the Implied Volatility for Back Months, and that you can execute counter spreads to take advantage of that information. Also notice that the Time Decay for the Front Months is much higher than the Time Decay for the Back Months. This is what is referred to as Time Skew.
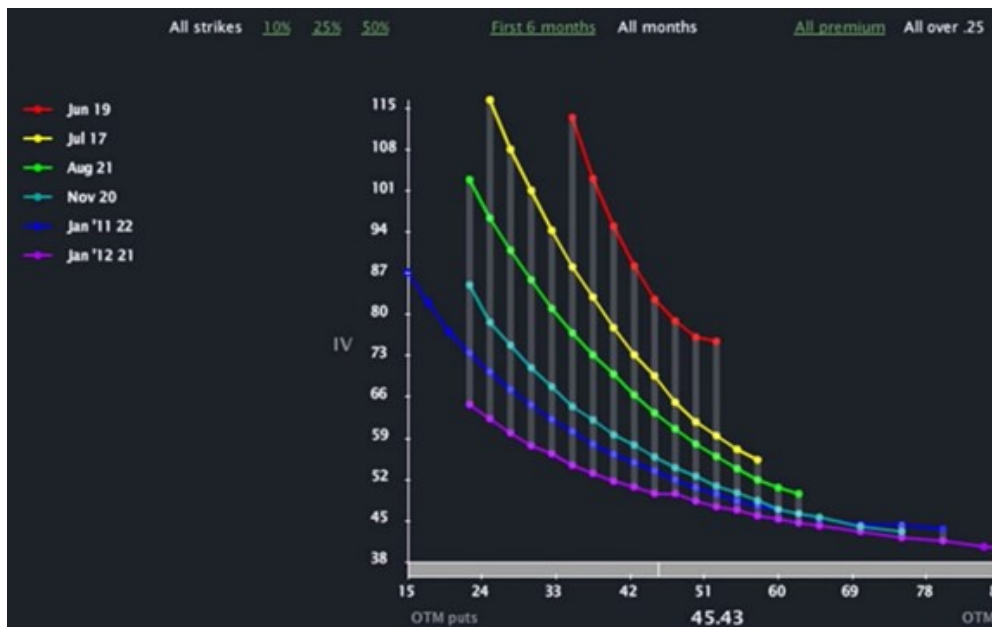
Figure 27- Implied Volatility Term Structure

Approach

• Often higher demand for Puts indicate that there is a higher difference in Volatility between the Front Months and the Back Months.

• Large horizontal Time Skew between two months can give you an advantage of the spikes in the Volatility of the market. If there is a binary event such as earnings, the Front Month contract that expires prior to the earnings will have spikes in the Implied Volatility and the Time Decay will be greater.

• The Theta decay in a Front Month is greater than that of a Back Month.

• Calendar Spreads are buying strategies that take advantage of the Time Decay, and benefit you when Implied Volatility is lower and options are relatively cheaper. The rate of Time Decay in the Front Months will be higher, and as long as the market does not make a rapid move to the Upside or the Downside and stays in the range, you can take advantage of the Time Skew and Time Decay.

• This provides an opportunity to buy options at a cheaper price and take advantage of Volatility potentially increasing thereafter

• You benefit when Theta rises and you are already trading spreads, because the rise of the Theta means that there is a higher Time Decay in the extrinsic premium of options.

23. The Greeks: Delta

Introduction:

Delta is a measure of the change in an Option's theoretical value given a $1 change in the underlying. It can used to approximate the price of the option as the stock moves by dollar, and you can set the limit and stop prices based on this information. Hence it is important to know the relationship between the Stock and the underlying option in terms of the price of the underlying asset.

A positive Delta can mean either that, when the stock value goes up, the option value will also go up, or that when the stock value goes down, the option value will also go down. On the other hand, a negative Delta can mean either that, when the stock value goes down, the option value will go up, or when the stock value goes up, the option value will go down. In short, a Positive Delta means that you are bullish and a Negative Delta means that you are bearish on a position.

• Long Stock Delta is 1.

• Long Calls have Positive Delta.

• Short Calls have Negative Delta.

• Long Puts have Negative Delta.

• Short Puts have Positive Delta

Delta Defined

Delta is a number between 0 and +/-1.00 that has a variety of different uses and interpretations such as Hedge Ratio, change in price of an option given as $1 change in the underlying stock and the probability that an option will finish in-the-money. The higher the Delta, the higher the probability that the option will expire ITM. Buying an Option with higher Delta, or selling an option with lower Delta, increases the Probability of Success.

Traders often use Delta as a stock equivalency for that option. Delta tells the trader how many shares to buy or sell, in order to establish the offsetting position, to create an overall delta neutral position, at that moment in time. Hedge ratio is important as it gives you a sense of how much exposure you have to the market and enable you to initiate negative delta positions in order to maintain a neutral market portfolio. See Table 28.

Position	Delta
Long 100 shares of stock	+ 100
Short 100 shares of stock	- 100
Long 1 call (45 delta)	+ 45
Short 1 call (55 delta)	- 55
Long 1 put (70 delta)	- 70
Short 1 put (60 delta)	+ 60

Figure 28- Computing Delta

To build a market neutral portfolio or a slightly bullish portfolio, look at both the overall and individual deltas and decide whether to maximize exposure to the market by initiating positions with negative deltas, or minimize exposure to the market. As an example, let's go through a scenario. Suppose XYZ is trading at $105 and May 105 Call Trading to 1.25, then the Delta is 0.48. Now if the Stock value for XYZ moves up by a dollar to $106, then the Delta value will $1.25+ $0.48 = $1.73.

24. The Greeks: Theta

Introduction:

Theta is the change in an option's value given a one-day change in time. All options lose value over time and as expiration approaches. The rate at which an individual option loses value is primarily a function of how much time remains until expiration. Options tend to decay the most in value during the final 30 days, at which point, price decay accelerates.

Theta is expressed as a negative number to represent the loss of value as time passes. Since the time remaining on an option can never increase, Time Decay is a one-way street. If Theta is -0.05, the option will lose $0.05 per day in value. Theta can change over time if the price of the Stock doesn't change. So, an OTM $3.50 option with a theta of -0.05 today will be $3.45 in value tomorrow. Also, if the stock does not move, the value of the option will approach zero as long as it remains out-of-the-money.

$DJX (NASDAQ) CBOE DOW JONES INDL AVG INDE as of 11:58 AM CST 03/17/2014		Last	Change	Volume	High	Low	Bid	Ask	Action
		162.38	1.72 / 1.07%	00	162.70	160.66	0.00	0.00	▶

Chain Type Single   **Number of Strikes** 4

		Calls				Strike	Puts					
Action	Symbol	Bid	Ask	Last	Change	Strike	Symbol	Bid	Ask	Last	Change	Action
▶	DJX 20Sep14 155.00 CALL	10.45	10.70	09.84	00.00	155	DJX 20Sep14 155.00 PUT	04.40	04.60	04.15	00.00	▶
▶	DJX 20Sep14 160.00 CALL	07.05	07.30	06.59	00.00	160	DJX 20Sep14 160.00 PUT	06.00	06.20	07.10	00.00	▶
▶	DJX 20Sep14 165.00 CALL	04.25	04.45	03.80	00.00	165	DJX 20Sep14 165.00 PUT	08.20	08.40	08.40	-00.97	▶
▶	DJX 20Sep14 170.00 CALL	02.21	02.35	02.06	00.00	170	DJX 20Sep14 170.00 PUT	11.10	11.35	11.07	00.00	▶

66% Intrinsic: 2.46 Time: 4.74   160   100% Intrinsic: 0 Time: 6.1

Figure 29- Options Strikes for the Dow Jones Industrial Average Index

Example

Let's go through an example where a stock is trading at $162.38 and the price of 160 Strike Call Option is $7.20 as shown. Here the extrinsic portion of the option's value is subject to Time Decay. Since the stock is trading at $162.38 and the option is 160 Call, at least $2.46 is of intrinsic value and any value above $4.74 will be extrinsic value and therefore subject to Time Decay, regardless of the time remaining until Expiration. The biggest portion of that decay will occur in the final 5 to 20 days prior to Expiration.

25. The Greeks: Vega

Introduction:

Vega is the change in an option's theoretical value given a 1% change in the volatility of the underlying. Keep in mind that when a market sells off or in anticipation of a binary event such as earnings, the Volatility increases. So, as the Volatility increases, the premium will also increase even if your underlying stock does not change in price.

A positive Vega can mean either that, when the Implied Volatility goes up, the position generally gains in value, or that when the Implied Volatility goes down, the position generally loses value. On the other hand, a negative Vega can mean either that, when the Implied Volatility goes down, the position generally loses in value, or when the Implied Volatility goes up, the position generally gains value.

An important concept is that the Front Month option prices are affected less by change in underlying Volatility. So, as you approach the Expiration Months for Front Month options, it has less extrinsic value than the Back Month options. Hence they are effected less by the changes in the underlying Volatility.
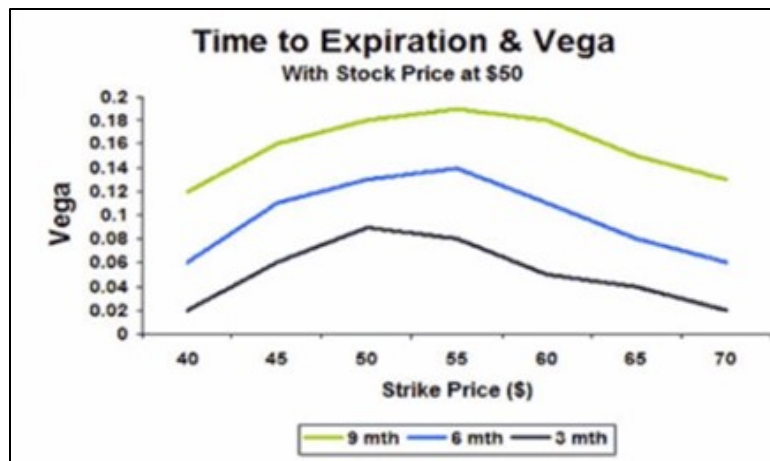

Figure 29- Options Strikes for the Dow Jones Industrial Average Index

Example

Let's go through an example for Vega. Here, let's assume that the stock price and the days till Expiration stays the same. Assuming the Implied Volatility increases 2 points for the Sept 160 Calls on Dow Jones, the price of the option would increase $1.35. As you can see, when the Volatility is 11.73, the theoretical value is 6.75.

If Implied Volatility increases by 2 points to 13.73, the theoretical value will increase to 8.10, which is a change of $1.35. But the most important thing to keep in mind is that, if Implied Volatility increases and you have a positive Vega, then the underlying option will also increase. So, if you are a Long Call or a Long Put and the Volatility increases, then you make more money. And if you are short an option and Volatility increases, you lose money.

26. The Greeks: Gamma

Introduction:

Gamma measures the change in Delta of an option with $1 move in the underlying. Think of this as similar to the concept of velocity versus acceleration. Here, Gamma is the acceleration and Delta is the velocity. Gamma measures the stability of the Delta and its acceleration as prices change. So, similar to that of a car where same velocity means zero acceleration, Gamma shows you the changes of underlying Delta.

The Delta with the higher Gamma will have a higher risk (and potential reward too). Given an unfavorable move of the underlying, the Delta with the higher Gamma will exhibit a larger adverse change.

If you have a Long Position, then the increase in Gamma will increase value of the Option Price, thus earning you more money. On the other hand, if you have a Short Position, increase in Gamma will increase value of the premium, resulting in losing money.

So, Gamma is important regardless of whether you have a Long or Short Option. The closer to Expiration, the faster options move in reaction to changes in the underlying. You should not wait until expiration, because the closer you are to Expiration, the Option behaves more like underlying stock as shown in Figure 31A

The best way to understand Gamma is to look at Delta across a range of Strike Prices. Let's say that the Stock is trading at $104 and you have 37 days till Expiration, then the Gamma is as shown in Figure 31B.

If we fast forward from 37 to 9 days before Expiration, the Deltas and Gammas for each Strike are markedly different. The real action is happening near the at-the-money strikes where they are behaving like underlying stocks. As you can see, the Gamma increases dramatically as the differences between the deltas becomes more pronounced.
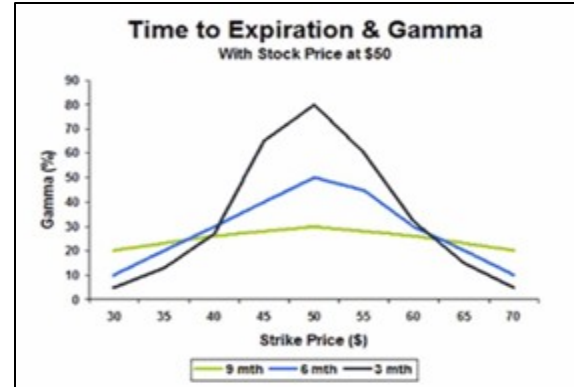

Figure 31a- Increasing Gamma

Option	Delta	Gamma	Option	Delta	Gamma
65 Call	100	0	65 Put	0	0.2
70 Call	100	0.6	70 Put	-1	0.4
75 Call	97	1.2	75 Put	-3	1.2
80 Call	91	1.2	80 Put	-9	1.2
85 Call	85	1.4	85 Put	-15	1.2
90 Call	78	2.0	90 Put	-21	2.2
95 Call	68	1.8	95 Put	-32	2.4
100 Call	59	2.2	100 Put	-40	2.4
105 Call	48	2.2	105 Put	-52	2.2
110 Call	37	2.0	110 Put	-63	2.0
115 Call	27	1.8	115 Put	-73	1.8
120 Call	18	1.6	120 Put	-82	1.6
125 Call	10	0.8	125 Put	-90	1.4
130 Call	6	0.8	130 Put	-93	1.2
135 Call	2	0.4	135 Put	-99	0.2
140 Call	0	0	140 Put	-100	0

Figure 31b- Gamma across Strikes

		Days to Expiration					Days to Expiration		
		37	37	9	9		37	37	9	9
Option	Delta	Gamma	Delta	Gamma	Option	Delta	Gamma	Delta	Gam
65 Call	100	0	100	0	65 Put	0	0.2	0	0
70 Call	100	0.6	100	0	70 Put	-1	0.4	0	0
75 Call	97	1.2	100	0	75 Put	-3	1.2	0	0
80 Call	91	1.2	100	0.2	80 Put	-9	1.2	0	0.2
85 Call	85	1.4	99	0.8	85 Put	-15	1.2	-1	0.8
90 Call	78	2.0	95	1.6	90 Put	-21	2.2	-5	1.6
95 Call	68	1.8	87	3.2	95 Put	-32	2.4	-13	3.2
100 Call	59	2.2	71	4.6	100 Put	-40	2.4	-29	4.6
105 Call	48	2.2	48	4.4	105 Put	-52	2.2	-52	4.4
110 Call	37	2.0	26	3.2	110 Put	-63	2.0	-74	3.0
115 Call	27	1.8	10	1.4	115 Put	-73	1.8	-89	1.6
120 Call	18	1.6	3	0.4	120 Put	-82	1.6	-97	0.4
125 Call	10	0.8	1	0.2	125 Put	-90	1.4	-99	0.2
130 Call	6	0.8	0	0	130 Put	-93	1.2	-100	0
135 Call	2	0.4	0	0	135 Put	-99	0.2	-100	0
140 Call	0	0	0	0	140 Put	-100	0	-100	0

Figure 31b- Gamma across Strikes

Section III

Technical Analysis

Technical analysis is important for both stock and options traders. At its core, technical analysis is a study of supply and demand in a market. This information helps traders to determine the general direction or trend from a broader perspective. In this section we will look at Technical Analysis terms such as Trend, Support & Resistance, Fibonacci Retracement, Bollinger Bands, and other useful tools. There are four segments to this section:

Introduction to Technical Analysis

Oscillators

Chart Patterns

Reading Predictions

Introduction:

A trend is loosely defined as the period when a stock is consistently moving up or moving down. Chartists use patterns to identify current trends, trend reversals, and to identify buy and sell signals. We use several tools to find trends and assess their strength.

Time Frames

Chart Time Frames are of 3 different types based on their candlestick duration, which will reflect a particular amount of historical data and be used to determine 3 different time horizons for a trade:

Short Term (5-30 minutes): These candlestick durations will be looking back in days or weeks worth of data, and be used to inform intraday trading strategies.

Medium Term (1-4 hours): These candlestick durations would be using about 4 months worth of data, for example, and be used to inform swing-trading strategies.

Long Term (1-5 days): These candlestick durations would be looking back 12-24 months worth of data, and be used to inform long-term investment strategies.

It is very important to choose the appropriate chart based on your preferred time frame for trading. If you are a Buy and Hold Trader, then you can look at the daily, weekly or even monthly charts. Tradespoon's charts will typically depict the underlying Stock trend, the Fibonacci Retracement for the trade and various other key technical indicators.


Figure 32- Tradespoon Stock Chart

Uptrends, Downtrends, Trendless

Chart trends gives the trader an idea of the general direction of an asset's value. Trends can exist as either Uptrends, Downtrends or Sideways trends. It's important to know the general direction of an underlying asset-you have to be absolutely sure on the value of a Stock at a certain time.
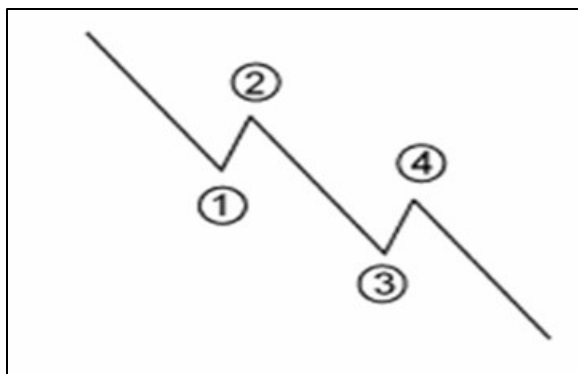
Uptrends

Uptrends are generally characterized as showing Higher Highs and Higher Lows in an asset's value over a specific period of time. The example shown depicts an Uptrend as point 6 is higher than point 4 and (Higher High) and point 5 is higher than point 3 (Higher Low).
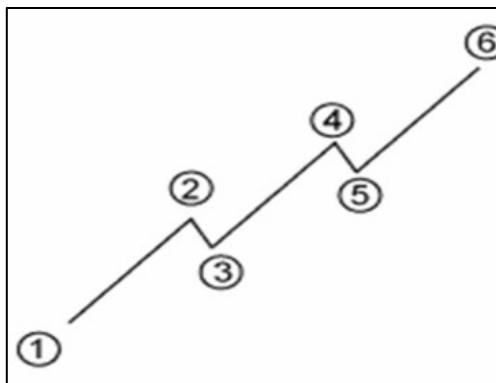
Downtrends

Downtrend is the inverse of Uptrend- generally characterized as lower highs and lower lows in an asset's value over a specific period of time. When you are making lower highs and lower lows as time goes by, that limits your trading style and trading horizon. The example shown depicts a Downtrend since point 3 is lower than point 1 (Lower Low) and point 4 is lower than point 2 (Lower High).

Sideways trends

Sideways Trends are generally characterized as showing steady highs and steady lows in an asset's value over a specific period of time.

Introduction:

Understanding the dynamics between support and resistance levels is a core component to analyzing market movements at the technical level. The first step in analyzing these levels requires a trader to be adept at reading Candlestick charts, which you will see often in all charting and research tools.

Candlestick Charting

A Candlestick Chart is a chart that depicts the events of a day in the form of a Candlestick. It enables even those who are new to Technical Analysis to easily understand the data by just glancing through the chart. Here we will analyze Candlestick based on the daily chart, which is the most commonly used.

One Candlestick on a daily Chart means one day's worth of data. On a 30 –day, chart this could be just 3 hours' worth of data. The Candlestick depicts four very important data points: the **Open Price**, **Close Price**, **High** and **Low** for that day.

A blue Candlestick indicates that the stock made an upward momentum for the day. In such cases the Close Price will be higher than the Open Price, indicating gain. A white Candlestick means the Close price is below the Open Price. So, by just glancing at the chart you can easily figure out what happened on a specific day. You may also see Candlesticks in blue and red-indicating upward and downward movement, respectively.

Figure 33- Candlestick Chart

Support & Resistance Defined

Support is the price level at which demand is likely to be strong enough to prevent the price from seeing further declines. As the price decreases and approaches major support levels, and the commodity becomes excessively cheaper, traders are more inclined to buy the asset. In this sense, it can be said that support sometimes reflects a buying opportunity. Tradespoon provides you with both historical and forecasting charts that automatically plot key support levels.

Resistance is the price level at which supply is likely to be strong enough to prevent the price from further rallies. When a price increases and approaches resistance, the asset becomes excessively expensive and buyers are less active. Resistance often signals a selling opportunity.

Tradespoon provides Technical Charts that show key Support and Resistance levels with every trade recommendation. In Figure 34, sellers begin to put lot of pressure on the stock. It was facing resistance. Overhead Resistance is important because it can help with Strike price selection or help to determine at what price the stock is overbought.

Figure 34- Candlestick Chart w/ Support/Resistance levels

Introduction:

The core of Technical Analysis is a study of supply and demand in a market. Whether you use upper strategy or lower strategy, there are hundreds of different technical indicators, and some of them are more popular and commonly used. At the end of the day, they are all derived from the analysis of Price, Volume and Time. Even if you are looking at twenty different indicators, they are derived from the same data. These various indicators can be considered as a three-dimensional vector whose attributes are Price, Volume and Time.

Once you realize this, you will understand that Technical Analysis is kind of a self-fulfilling prophecy. If everybody depends on indicators such as Fibonacci Retracements, their actions are going to be same and will eventually lead to the same results. As an example, if everybody using Fibonacci Retracements knows that a stock has a key support level as its value depreciates and reaches 50% retracement, its value is most likely to go up.

Fibonacci Sequence

The Fibonacci sequence is a set of numbers that starts with a one or a zero, followed by a one, and proceeds based on the rule that each number (called a Fibonacci number) is equal to the sum of the preceding two numbers. A Sanskrit grammarian named Pingala, who lived sometime between the fifth century BC and the second or third century AD, is credited with the first mention of the Fibonacci sequence of numbers.

It is named after the Italian mathematician Leonardo Pisano (also known as Fibonacci) who lived from 1170-1250, as it has he who introduced it to the Western civilization. Fibonacci numbers are of interest to biologists and physicists because they are observed to occur more frequently in nature. For instance, the branching patterns in trees and leaves and the distribution of seeds in a raspberry are based on Fibonacci numbers.

Fibonacci Numbers

Tradespoon provides charts showing Fibonacci Retracements with each trade recommendation from our **Premium Membership Picks** service. Fibonacci retracements show horizontal lines which indicate areas of support or resistance which might precede reversals in price activity. Measuring a rally or decline and dividing the distance by ratios of 23.6%, 38.2%, 50%, 61.8% and 100% create these levels. Look at the time horizon of any technical charted package, and find the lowest point and highest point in the chart. By simply connecting those two dots and dividing the distance by ratios, you can draw your own Fibonacci Retracement.

Figure 35- Tradespoon Chart Sample

Our research at Tradespoon has shown that the probability of correctly predicting the position of a stock is highest between 50 to 75 days. This is why we favor charts that have 60 days worth of data.

Every stock that we recommend and on every recommended trade, you will see 60 days worth of data plotted by finding the lowest and highest points, and doing Fibonacci Retracements where the key retracements are 32%, 50% and 68%. In Figure 35, you will notice that Las Vegas Sand sold off after their earnings announcement.

Also, you will notice that 50% retracement is shown roughly at 59.5 meaning, 59.5 is a 50% retracement if there is no binary event for the next 10-20 days. In the absence of a binary event, it is most likely that Las Vegas Sand will not breach the overhead resistance at 59.5, meaning it will rebound and revert back to its mean as it approaches 59.5-so, this is your sell signal.

30. Bollinger Brands

Introduction:

A moving average envelope creates a channel that parallels another moving average. This allows you to identify the trend and use the upper and lower boundaries as Support and Resistance Levels. Bollinger Bands are a modification of such moving average envelopes. Rather than surrounding the moving average by a constant percentage, Bollinger Bands use a measure of historical volatility to adjust their bandwidth. Figure 36A includes moving averages and different other upper and lower statistics that can be used in congestion with Bollinger Bands.

Figure 36a- Moving Averages

Figure 36B, includes an example of Bollinger Bands. Bollinger Bands can be used for stocks and indexes, especially during market sell off. It can be used to measure market volatility, trend, and whether the market is oversold or overbought. The red colored lower band in the example is considered to be an oversold condition.

Figure 36b- Bollinger Bands

Bollinger Bands are similar to moving average envelopes with one key distinction - they reflect Volatility. We can construct Bollinger Bands by applying a simple moving average, usually of 50 days, to a stock and then applying an envelope to the moving average. This means that the range between the two Bollinger Bands at any given time represents 95% of the price movement or trading range for the past 50 days. Keep in mind that Bollinger Bands are a reflection of past performance of underlying assets. Each strategy using Bollinger Bands relies on the indicator's excellent ability to identify volatility levels.

The Squeeze

The squeeze takes advantage of the sudden increase in Volatility that generally occur after periods of containment. When a stock trends in a flat range, the bands constrict and eventually become very narrow. In most cases, when a stock price has been constrained for a prolonged time period, it eventually exploded out of its trading range. This increased volatility causes the Bollinger Bands to widen dramatically.

Figure 36C, the daily Chart of Groupon depicts an example of Squeeze. You can identify potential Squeeze Trades when Bollinger Bands constrict to their narrowest position over the past four to six months.

Figure 36c- Groupon Squeeze Play

In Figure 36D, the Buy Signal $SPX broke above its moving average at $1950. The Index exceeded the upper band and moved above it for the month. On the other hand, Sell Signal happened when the Index price crossed below the 50 days moving average or when the upper band began to trend back down towards the moving average.

Figure 36b- Bollinger Bands

31. Oscillators: Envelopes

Introduction:

A moving average Envelope creates a channel that parallels a moving average, and it allows you to identify the trend and use the upper and lower boundaries as Support and Resistance Levels. But unlike Bollinger Bands, the moving average Envelopes have the same distance between the upper and lower bands.

Moving average envelopes are effective tools not only for identifying Support and Resistance, but also for helping to establish limit and stop orders. An envelope is created by plotting a Simple Moving Average, then plotting two additional lines parallel to the moving average - one line above the moving average line and one below the moving average.

Envelopes can be used to place stop and limit orders, and also to identify Support and Resistance Levels as shown in Figure 37. When the stock bounces up off the lower band, it indicates a Buy Signal. Sell Signal enables you to set your profit target at the Upper boundary of the Envelopes.
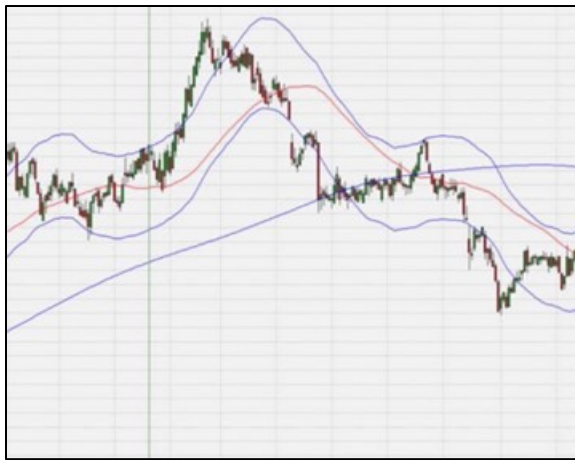

Figure 37- MA Envelopes

A break above the Upper Band often signals a new bullish trend is underway. Conversely, if the stock breaks below the Lower Band this could signal a new bearish trend developing. Like many Technical Indicators, these signals should be analyzed in the context of the current trend and other Support and Resistance Lines established by Tradespoon's analytics or other Indicators.

32. Oscillators: RSI & Moving Averages

Introduction:

The Relative Strength Index is a type of Momentum Oscillator and an example of lower study –such as volume. The Tradespoon chart below depicts RSI. It can be used as Support and Resistance Levels:

• A Buy Signal is indicated when the RSI moves off very low levels.
• A Sell Signal is indicated when you can set your profit target at the upper boundary of RSI, usually around 70.
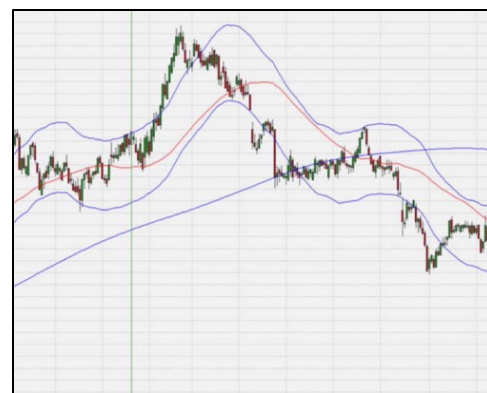

Figure 38- Moving Averages

Moving Averages

The Moving Average (MA) the most commonly used trend-identifying tool and smooth trend lines to avoid the static of erratic price movements.

Moving Averages draw information from past price movements to calculate their present value and only show trend changes after the market has begun to decline or rise. Moving Averages can be applied as Trend Indicators and possible indicators of Support and Resistance Levels.

Example Use Case

• **Start** by selecting a trending stock to analyze.

• **Select** a time frame for the moving average that reflects your investing style.

• **Buy** when the shorter moving average crosses above the longer moving average.

• **Sell** when the shorter moving average crosses below the longer moving average.

• **Set** stops below the longer average for your long positions.

• **Watch** for confirmation from candlesticks and Tradespoon's Support and Resistance predictions.

Introduction:

Statistical Analysis drives everything at Tradespoon. We try to predict key Support and Resistance Levels, indicate which stock to trade on a daily basis and determine the predictability factor. It is very important to make sure that you understand the basics of Statistical Analysis in order to generate safe and successful trade ideas. Let's look at some of the key terms like **Bell-shape Curve, Probability Analysis, and Standard Deviation**.

The Bell Curve

What is the bell-shape curve and why is it important to know in technical analysis? A Bell-shape curve can be seen in the chart below, which represents a series of rolling dice. When you roll two dice repeatedly you will get 7 most of the time-or about 60% shown in Figure 39A. Rolling 6 and 8 will likely occur 40% of the time, and so on and so forth. By connecting the points in the chart, you will draw a Bell-shape curve.

This is the process of analyzing possible future events by considering alternative possible outcomes, also called alternative worlds. Thus, the scenario analysis, which is the main method of projections, does not try to show one exact picture of the future. Instead, it presents several alternative future developments. This is especially true for stock and option trading where it is important to predict the possible outcome of a trade- including where the position of the stock may be by expiration or what the time horizon for the trade is.

Standard Deviation

Standard Deviation helps determine support and resistance of the underlying stock based on Implied Volatility or Historical Volatility. In Figure 29B, μ indicates the current position of the stock, and naturally it can go up or down. (μ-1) is called 1 Standard Deviation and the Chart predicts the stock to be within this range 68% of the time. (μ-2) is 2 Standard Deviation and the stock is predicted to trade within this range 95% of the time. So, using Statistical Analysis and Bell Shaped Curve, an option or stock trader will be able to predict with a certain amount of accuracy, what the stock price will be by the time the trade comes into realization.

Probability Calculator Revisited

Tradespoon's Probability Calculator shows Support and Resistance Levels, Trend Predictions, Buy and Sell Rates, and thus helps you determine the Optimal Strategy to implement.

Figure 39C shows Dow Chemical trading at $50.85 and predicts an 11% probability of it gaining about 10% and reaching $54.54 within the next 50 days. On the bottom of the Chart, you will see Standard Deviation intervals. These are measurements of Historical Volatility-based on price movements of the past 50 days for DOW Chemicals-and Implied Volatility, which is based on demand and supply in the money options for the next 50 days.
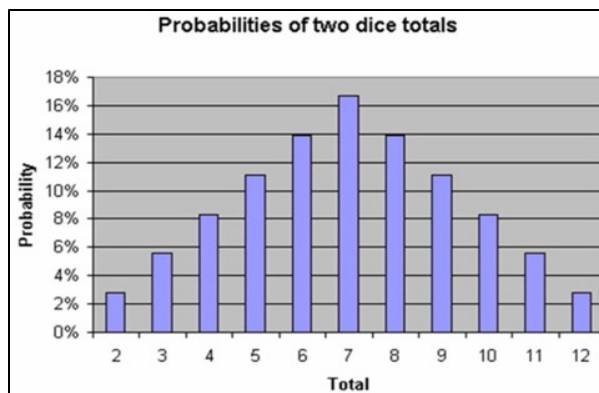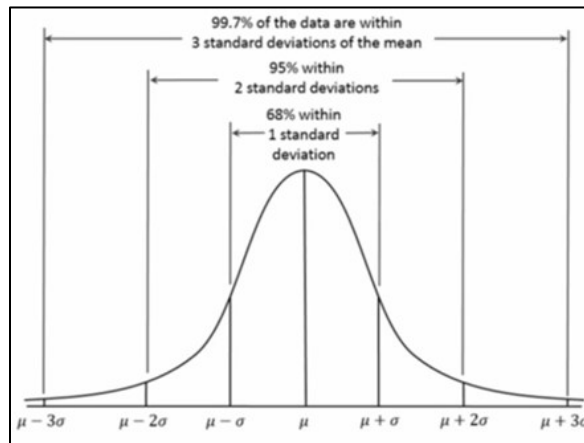

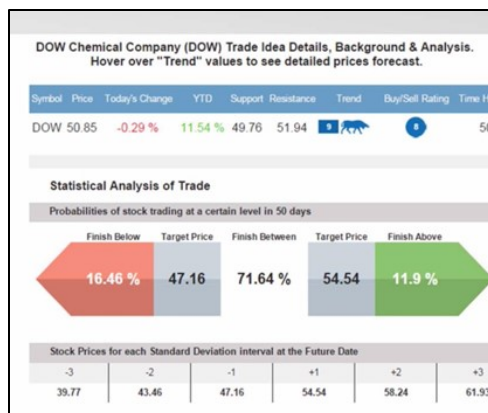Figure 39a- Bell Shape Curve

Figure 39b- Mean & Standard Deviation

Figure 39c- Probability Calculator

34. Seasonality

Introduction:

Seasonal Charts graph the historical performance of each stock to help forecast future performance. It examines how a stock has performed in the past and how it will likely fare under different conditions. This tool may help you decide whether to be bullish or bearish. It also estimates how long uptrends and downtrends are likely to last. It approximates where the tops and bottoms are likely to occur so that you can set up Buy and Sell Stops. Seasonal charts also determine which price 'blips' are indicator whipsaws that might produce trading losses.

Seasonal Charts by Tradespoon

Tradespoon's Seasonal Charts show the 10 days Support and Resistance Levels and provides predictions on whether the stock is going to be in an uptrend, downtrend, or sideways trend. It also helps determine trend predictions for 10 to 75 days, find correlation between Current Price Action and Historical Prices, and can be used to determine Trend and Resistance Levels for ETFs.

Many stocks follow certain seasonality based on weather or based on the geo-political events. Some of them tend to sell-off in summer or make new highs in October or December. So, finding a correlation between Current Price and Historical Price may help to analyze if the stock will follow its historical patterns or not. Tradespoon's Seasonal Chart helps to determine the Trend and Resistance levels of all the 80 odd stocks that trade on AMEX Exchange. It also monitors all stocks that trade at NASDAQ and New York Stock Exchange.

Example

Seasonality and Predictions can provide insight into how stocks will trade in the future. In the given example, the green line shows you Seasonality and the orange line shows the Tradespoon prediction for the next 10 days. This can help you find the most Optimal Entry or Exit Points when getting into a position or getting out of the position.

Figure 40- MA Envelopes

35. Chart Patterns: Rectangles

Introduction:

Chart Patterns, or Price Patterns, are tools for displaying data that reflect investor psychology and sentiment. It shows what has happened with the stock in the past and can be used to project future price direction. Some of the most commonly used Chart Patterns are Flags, Triangles and Rectangles.

Rectangle Pattern

Rectangle is the most common Chart Pattern. When price reaches similar Highs and Lows multiple times, we get a Rectangle Chart Pattern. These patterns are consolidations of intermediate-term trends and can last several weeks to months. The time horizon is very important when analyzing Chart Patterns. If you are a day trader, these patterns will not have much relevance for you. But for a Swing trader who holds a position for 30-60 days, these patterns are very important. The longer the time period that is being analyzed, greater the relevance of these patterns.

The parallel Support and Resistance Levels of Rectangular Patterns can be horizontal or have a slight slope. Several well-known patterns fall into this category, including the Double Top, Triple Top, Double Bottom, Triple Bottom, Head and Shoulders and Inverse Head and Shoulders.

Figure 41a- Rectangle Pattern

Set Up

The Rectangle Pattern is usually created by two or more touches on both Support and Resistance, Short-Term Trend creating similar Highs and Lows, Intermediate-Term Trend and decreasing Volume. The entry into Rectangle Pattern is caused by break in direction countering the previous Trend, leading to an above-average Volume and reversal of the pattern.

Figure 41A shows that there was a sell-off in May, June and July. Then, the green line becomes a Support and the stock touches the green line twice. Next, there is an above average volume as indicated by the green line in the volume section at the bottom sloping to the right. The stock breaks Overhead Resistance formed by the red line. This is the classic formation for the Rectangle Pattern. Also you can see a reversal on the pattern-before it was bearish sentiment, now it has changed to a bullish sentiment. This can happen after earnings announcements

Example

Figure 41B shows an example of Uptrend Reversal called Head and Shoulders Top. Unlike in the Rectangle Pattern, here you will see three touches to the top. The first touch on the left can be considered as the left shoulder, the second one in the middle is a bit higher and can be considered as being at head level and the third can be considered to be over your right shoulder. Also, at the bottom of the average volume, you see a break out of the neckline from the head and shoulder pattern. This is the reversal pattern.

Figure 41b- Reversal Pattern

Review

Be aware of the dominant trend in the market - even if you are not looking to trade in the same direction. Price patterns can give a glimpse of what a stock's future may be because investors tend to react to price movements in a fairly predictable manner. If you learn to distinguish the patterns that are forming before the next major price move occurs, you can take part in some extremely profitable trades. Price patterns are not infallible, but they certainly put the odds in your favor. Looking at the Short-Term Trend and Long-Term Ratings can help improve your chance of being successful, especially if you look at the Tradespoon Technology and overlay it with some of the longer-term Chart Patterns.

36. Chart Patterns: Triangles

Introduction:

An ascending Triangle is a pattern that appears during an Uptrend when a Stock begins to consolidate between a flat Resistance Level and an upward-sloping Support Level. This usually happens during a binary event, when bulls and bears walk along these two lines; one is a parallel line indicating an Overhead Resistance and the other one a slope that is the Short-Term Support. To be a valid ascending Triangle, the price must bounce twice off both the Support and Resistance Levels. These are more prevalent when the Chart Patterns are formed over long periods of time and is found to commonly occur on breakout after a 52-week high. You might have to wait weeks or months for the Chart Patterns to form. Unlike Rectangle Pattern, Triangles are continuation patterns.

Set-up: Ascending Triangle

In Figure 42A, you can see an Uptrend in May and June when the stock reaches an Overhead Resistance of $72 indicated by the red line. There is also a slanted upward movement of the green line on the upper half of the chart - this indicates the Short- Term Support. Since the red line indicates the Overhead Resistance and the green line indicates the Short-Term Support, this is an Intermediately-Term Uptrend. The entry point for the setup is usually the break above resistance. This can be seen on July 11th when there is a breakout of the Overhead Resistance and above- average Volume.

Set-up: Descending Triangle

Descending Triangle is the opposite of the Ascending Triangle. As shown in Figure 42B, if there is a sell-off in May, June and July, then the red line on the upper half of the Chart will represent Overhead Resistance and the green line will represent Long-Term Support. This means that there are less and less buyers in the market and hence you will see a Descending Triangle. If the stocks breaks out above the Volume, as shown in the Chart at $37.50, it indicates a sell signal. The sell signal occurs when the Support break above Resistance and above average Volume, at least for several days. At this point going long probably is not a good idea for this set up. The key point to note is that unlike the Rectangle Pattern, the Triangle Pattern is continuous.

Review

It is always important to be aware of the dominant trend in the market - even if you are not looking to trade in the same direction. Price Patterns can give a glimpse of what a stock's future may be because investors tend to react to price movements in a fairly predictable manner.

Even though Price Patterns are not infallible, they certainly put the odds in your favor. So, you should consider using Tradespoon's tools that shows you the Chart Pattern, predicts the position of the stocks into the future and looks at the Technical and Fundamental Analysis and help you gain most from your trade.

Figure 42a- Ascending Triangle

Figure 42b- Descending Triangle

37. Chart Patterns: Flags

Introduction:

A Flag is a Short-Term Pattern that forms over a few days or weeks, especially after an earnings announcement. It can either be bullish or bearish. However, Flag Patterns are usually viewed as continuation patterns or a slight pause in the current trend. So, anytime there is a binary event you can see that the Flag being established prior to it. The rallies are referred to as 'Flag Poles', and usually occur after a binary event such as earnings.

The Delta with the higher Gamma will have a higher risk (and potential reward too). Given an unfavorable move of the underlying, the Delta with the higher Gamma will exhibit a larger adverse change.

Set-up

A Flag Pattern occurs due to the event of an initial strong Short-Term price movement followed by a sideways price movement, parallel Support and Resistance Lines as shown in the Chart. The red line is the Overhead Resistance and the green line is the Support and there is decrease in Volume.

In Figure 43A, the stock rallies to the upside starting March 29th and going into April 12th. Then you see the buyers taking the profit off the table. When the buyers take the profits off the table, especially before the earnings announcement, you will see the pole of the Flag. You can see how the red and green lines are parallel starting from April 12th to April 19th. The Entry is a breakout against direction of previous trend. So, you can see a breakout of Overhead Resistance on April 26th-this is your entry point and it has happened on an increased Volume.

Example

As mentioned, Flags are also continuation patterns. On July 6th and July 7th you can see the violent move to the outside after the Short-Term consolidation phase, and you have a continuation of the upward momentum. So, your entry point is right around $34-34.25. You know that there is an earnings announcement coming up, and hence the buyers are taking the profits off the table and this pattern continues into the next earning cycle.

If we fast forward from 37 to 9 days before Expiration, the Deltas and Gammas for each Strike are markedly different. The real action is happening near the at-the-money strikes where they are behaving like underlying stocks. As you can see, the Gamma increases dramatically as the differences between the deltas becomes more pronounced.

Review

Be aware of the dominant trend in the market, even if you are not looking to trade in the same direction. And Price Patterns can give you a glimpse of what a Stock's future may be because investors tend to react to price movements in a fairly predictable manner. If you learn to distinguish the Patterns that are forming before the next major profit move, you can take part in some extreme profitable trades. Price Patterns are not infallible - so you have to make sure not to rely on them entirely and should instead also look at Systematic Analysis like the ones provided by Tradespoon. If you take that information and overlay that with Chart Patterns, it will really improve the odds in your favor.

Figure 43a- Flag Patterns

Figure 43b- Flag breakout

38. Reading Predictions: Neural Networks & Predictions

Introduction:

Most retail investment technology services use traditional technical analysis, composed of simple mathematical formulas, standard deviations, and general statistical formulas. These formulas are applied to elaborate real-time data structures but fail to offer the user a true edge. The stock market- as a collection of always-changing data sets- is extremely chaotic, full of unstructured noise and hidden relationships every day. Making sense of this data requires living, breathing mechanisms that can self-learn in real time.

This is where Tradespoon is different: we use an ongoing learning and feedback loop- reliant on hyper-fast data processing and advanced artificial intelligence called **Neural Networks**. Artificial neural networks behave like humans--making assumptions and rigorously testing them to reach the most logical conclusions. In the case of Tradespoon, a neural network performs back-testing against its own algorithms. Other advanced components of this system include **Adaptive Harmonics, Statistical Spectral Analysis,** and **Digital Filtration**.

This system is the backbone of all the tools and methods used at Tradespoon. We study how stocks have behaved in the past and try to predict how they will behave in the future. For example, we learn the behavior of stocks before and after earnings, and try to predict their behavior going into the next reporting cycles. Apart from knowing what the key prices will be on a certain date, we also isolate the trend and find Support and Resistance levels for several time horizons.

Honed over 15 years for unmatched predictive precision, our system monitors a universe of ~3,000 U.S. stocks based on recent news and price actions for each stock. Our team of trading industry veterans then conducts technical and fundamental analysis of the stocks ranked by our system. The result is a robust set of tools and recommendation services which allow the average self-directed investor to:

- Find stocks that may be undervalued, and rank them based on probability of a rise in value.

- Generate short and long term predictions for open and close prices, as well as support and resistance levels.

- Determine the statistical probability of a stock closing between or outside of target low and high prices.

- Analyze seasonal trends and pinpoint optimal entry and exit points to consistently capture profits and mitigate risk.

How it Works

Our sophisticated algorithmic system leverages predictive analytics, advanced artificial neural netowrks and hyper-fast data processing to find relevant patterns in voluminous stock data. Our platform uses this data to generate short and long-term forecsats, and can rank stocks that are determined to be undervalued in the market.

You can use our Stock Forecast Toolbox, Futures Forecast Toolbox and Forex Forecast Tool to generate intraday, 10-day and 6-month predictions.

We also offer tools which are optimized for 40-50 day outlooks, such as our Trade Idea Tool, Probability Calculator and Tradespoon Bulls & Bears.

Tradespoon also offers recommendation services built for different trading styles and goals:

- **ActiveTrader (Stocks & Options):** A daily-updated list of 3 Bull and 3 Bear recommendations with two Entry Prices, Stop Loss and Target Gain Prices. Designed for intraday trading or positions held for 1-2 days.

- **MonthlyTrader (Stocks & Options):** A weekly-updated list of 3 Bull and 3 Bear recommendations with two Entry Prices, Stop Loss and Target Gain Prices. Designed for swing trading.

- **Premium Member Stock & Options Picks:** Our team of experts conducts technical and fundamental analysis on equities ranking well within our system, and releases a recommendation package which includes a Stock trade, an Option trade, and an Option Spread trade. We provide proprietary research, statistical analysis and a monitor for all working orders we place.

- **RoboInvestor (Stocks Only)** This service provides a bi-monthly newsletter with 2 new long term buy/hold stock positions to be added to our live RoboInvestor portfolio. We provide monitoring of all open positions and all open, filled and cancelled working orders for all positons our trading team invests in, as well as real-time alerts for all portfolio activity.

39. Reading Predictions: 10 Day Predictions

Introduction:

The Stock Forecast Toolbox consists of a set of tools that allows you to type any symbol, ETF, index or stock and find the predictions for the next 10 days. It can forecast the Stock Price's Trend, Turning Points, Movement Vector's Direction, and 'Buy-Sell' signal with stunning accuracy for both a Short and Long term investment strategy.

10-day Predictions

The most frequently used forecast in this tool-set is our 10-day prediction. This will generate 1-day intervals with predicted Open, Close, Low, and High prices, along with a Vector figure (or predicted maginitude of change) for that day, relative to the date the forecast is generated. It is important to remember that prediction data reflects only the most recently updated market data.

For example- in a 10-day forecast, the 5th day predictions are relative to the market conditions that were captured in the previous trading session. If you were to generate a forecast again the next day, that 5th day may be slightly different because the model is working with a different set of data.

Accuracy Model Grade & Probability Figures

For each stock/ETF being analyzed, you will be presented with several important figures which indicate accuracy levels and probabilities of the asset reaching estimated price changes.

The Accuracy Model Grade is representative of predicted support and resistance levels for the next day only, and is a relative score compared to our entire data universe. An **A grade** indicates the top **10%,** a **B grade** is the top **25%,** and a **C grade** is **50%**. Occasionally you will see **N/A,** which indicates there is not enough market data to determine accuracy.

The **Estimated Change** figure is an average of predicted prices against the average of previous real prices. This includes Low, High, Open and Close prices.

The **Probability of Change** reflects the probability of determining the direction of the Estimated Change.

The **Probability L/H** figure shows you the likelihood of the real close price falling between the predicted support and resistance levels (Low and High levels).

Vector Column

The **Vector** column calculates the change of the Forecasted Average Price relative to "today's" actual price. The column shows expected average price movement "Up or Down", in percentages. Trend traders should trade along predicted direction of the Vector. The higher the value of the Vector, the higher its momentum. These figures should not be looked at as absolutes, but rather a guideline as to how a particular stock or ETF is predicted to move, relative to the current conditions.

Introduction:

For an options strategist, especially when the Implied Volatility is low, the strategy should be to select Expiration Months anywhere between 50 to 75 days. When Implied Volatility is high, like when there is a binary event or any other uncertainty in the market, you probably will have a smaller Time horizon, but still between 30-50 days.

In order to be a successful trader, you have to know which stocks to trade, develop a directional bias and, come up with estimates for Support and Resistance levels. Tradespoon develops and provides you with technology that help predict the trend and select corresponding Options Expiration Cycles.

Tradespoon's tools can forecast the stock price's trend, Turning Points, Movement Vector's Direction, and 'Buy-Sell' signal with significant accuracy for both a Short and Long Term investment strategy.

Here's an overview of some of these tools:

• Seasonal Charts
These charts can estimate the potential move in the Short Term. It can show you what our predictions are for the next 10 days, and also show you how the price of the stock will behave this year and in the future, based on historical information. It shows the Correlation between the current and past prices.

After generating a chart for a chosen stock or ETF, you will be presented with a chart that contains three main line graphs:

● Annual Seasonal- This graphs price levels for the retracement percentage for each day, over the past 25 years. For each trading day and for each year, our platform calculates an index which shows the percentage of retracement for the year low and the year high points. An average of that index across all available years is then generated. This graph will help you detect seasonal trends, as well as key support and resistance levels.

● Current Year- This graphs price levels for the current year, tracing back 90 days from the current date. You may also see data points from the previous year, at the start of each year.

● Predicted Price- This graphs our predicted price levels for the next 10 days. We use an advanced neural network to generate these short-term forecasts, which also allow you to see predicted support and resistance levels which are indicated with blue and red bars.

You will also notice a series of forecasts and accuracy ratings in the top right corner of your Seasonal Chart when analyzing a stock or ETF.

These figures are generated using two parallel prediction models, which are synthesized to produce a highly accurate outlook for the predicted momentum of a given asset. We show you the predicted probability of direction, and the back-tested accuracy of that probability, for four time horizons. You will see the statistical probability of bullish or bearish movement- along with an accuracy rating- for 20, 30, 40, and 50 day outlooks.

• Probability Calculator
This tool uses in-the-money options prices to determine estimated move for next 50 days. The main component of the Probability Calculator is its 50-day statistical analysis readout. This shows you the statistical probability of the stock or ETF finishing between or outside of the predicted low and high levels in the next 50 days. You can also see prices for Standard Deviation intervals at the 50 day mark. This ranges from ± 1 to ± 3.

41. Reading Predictions: Correlations

Introduction:

We see Correlation throughout our Statistical Analysis and all of our tools that do predictions use Correlations. In our Seasonal Charts, itself you can see Correlation in numbers. So that is why, we have chosen to go over the Seasonal Chart again and show where and why the Correlation is important.

Seasonal Charts are graphs depicting the historical performance of each Stock to help forecast future performance. They show how a stock has performed historically and will likely fare under different conditions. If a stock or ETF is correlated to historical price movements, it can give you what is the likelihood that the stock will follow that Correlation. It can also show approximately where Tops and Bottoms are likely to occur so that you can set Buy and Sell Stops. It also helps determine which price 'blips' are indicative of trend changes.

Correlation Defined

Correlation can be defined in the world of finance as a statistical measure of how two securities move in relation to each other. In order to predict stocks, you need to correlate them to some index or baseline. Correlation is computed into what is known as the Correlation Coefficient which ranges between -1 and +1. A Perfect Positive Correlation has a Correlation Coefficient of +1 and implies that as one security moves either up or down, the other security will move in lockstep, in the same direction.

Alternatively, Perfect Negative Correlation has a Correlation Co-efficient of -1 and means that if one security moves in either direction, the security that is perfectly negatively correlated will move in the opposite direction.

A perfect example would be any Retail stock like Home Depot and Lowe's, which are simultaneously announcing their earnings. Since both are in the same sector, have the same business model, and follow the same seasonal patterns, it can be said that they are highly-correlated.

Another example is Morgan Stanley and J.P. Morgan. It is very important to study these Seasonal Correlations, since certain stocks or banks will follow each other's pattern. A binary event can break the correlation for a short period of time, but from the historic perspective it will revert to its mean.

Figure 47- Seasonality Chart

Seasonality can provide a retail trader with an insight about whether current prices are correlated to historical price movements. In Figure 47, Correlation is 49% for SPY. You can see that the current prices of the stock market are correlated to its historic performance. We also know that the stock market usually sells off or trades in the range during the summer. This is why we see in June, July, August and September that we are in the range bound trading. But, starting with November and going into December, we are making new higher highs. Even though we roughly know this by experience, it would be nice to type in any ticker, find this seasonality, and identify correlation of how the stock behaves today versus how it behaved in the past.

42. Reading Predictions: Using the Probability Calculator

Introduction:

Our Probability Calculator helps you become a smarter investor by determining the likelihood of stock reaching a certain price level by a certain Expiration Date. Demand and supply of at-the- money and near-the-money options help determine Probability of Success. Higher Probability of Success means trading Strike Prices will be further away from current underlying stock price and vice versa. Probability Calculator can also be used to determine current Trend and Stock Ranking.
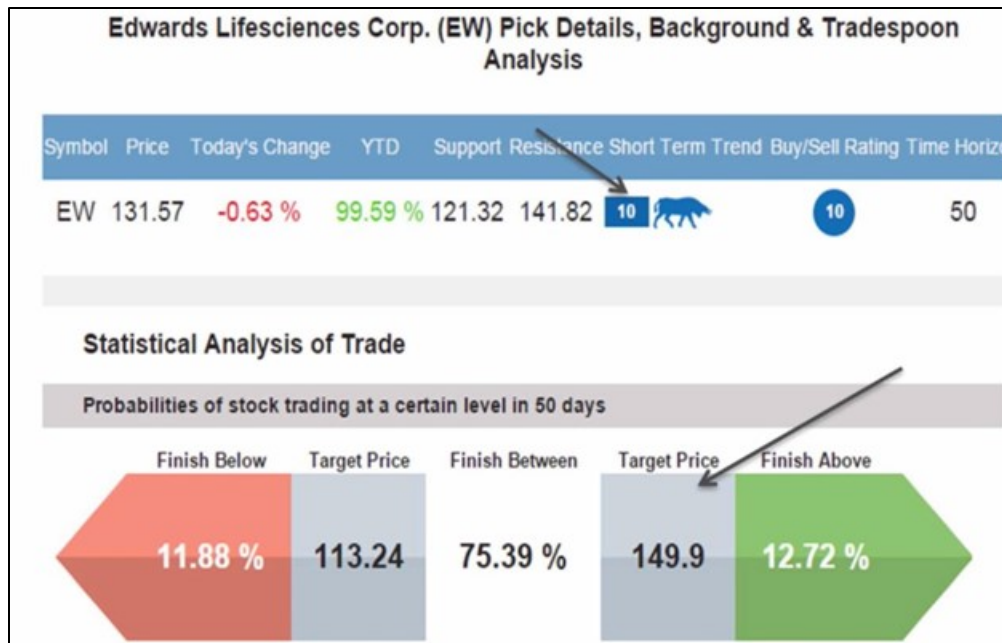

Figure 48- Probability Calculator Revisited

A traditional Probability Calculator does not have a Directional Bias and only indicates, based on the demand in the market for options, how wide the range will be for the stock by the Expiration Date. Tradespoon's Probability Calculator, on the other hand, actually gives you a Directional Bias by giving you a Short-Term Trend and Long-Term Rating. The most important aspect of Probability Calculator is that it can be used for Strike Price selection.

Section IV

Developing a Trading Plan

In this last section, we're going to introduce important analysis methods and principles for managing your portfolio, as well as honing in on your particular trading plan. We'll look at management techniques like portfolio diversification and understanding beta values, as well as an overall review of creating and managing trades.

43. Portfolio Management: Sharpe Ratio

Introduction:

Let's take a holistic approach towards Portfolio Management, concentrate on individual positions, and consider the optimum time to enter those positions. We will be looking into the first characteristic of Portfolio Management in this Chapter, namely Sharpe Ratio.

Normally, we look at individual positions, but as we have already seen in early chapters, in order to be a successful trader we also have to know about the direction of the stock and support/resistance levels. How can we build the portfolio in such a way that we can make money irrespective of whether the stock goes up or down, and thus remove the stress related to everyday management of the portfolio?

The only way to do this is to be comfortable with the Maximum Drawdown or the maximum exposure to the market, so that you are comfortable with your portfolio even if the market sells off at 10-20%. We will be going over some of the tools that help you to be comfortable with the Maximum Drawdown on your portfolio.

The first such tool is the Long/Short Equity Fund. It can be defined as a type of mutual fund that mimics some of the trading strategies typically employed by a hedge fund. Unlike most mutual funds, Long/Short funds use derivatives and short positions in an attempt to maximize total returns, regardless of market conditions. The amount of leverage used and the number of derivatives and short positions that Long/Short Funds may contain are limited by law. These funds tend to invest primarily in stocks.

At Tradespoon, we mimic the actions of institutional traders by building a portfolio that has both Long and Short Positions. We use either options or spreads to construct this portfolio. We have also built the **Portfolio Toolbox** (Figure 49), which gives you an overall characteristic of the Portfolio. These tools will address questions such as 'How much Exposure you have to the market?' or 'What is the Beta, Sharpe Ratio and Volatility of the overall portfolio?' You can check these numbers to know exactly how much Drawdown and Exposure you are having overall, and make sure that you are comfortable with this Exposure to the market.
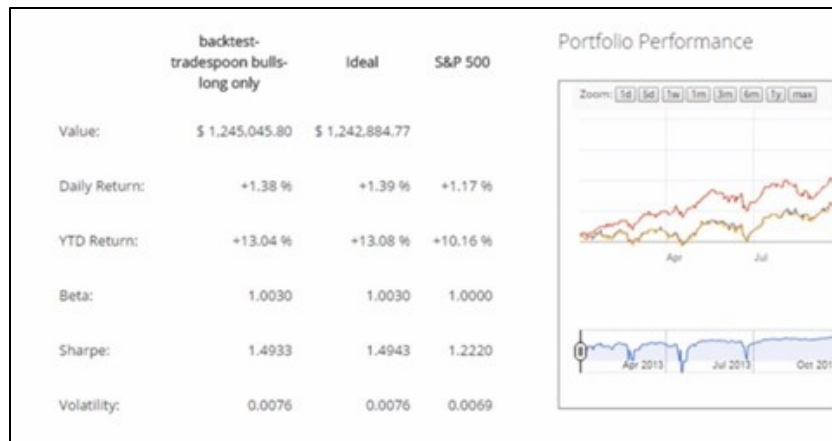

Figure 49- Portfolio Analyzer

Understanding Sharpe Ratio

Sharpe Ratio can be defined as the measure of a portfolio's excess return relative to the total variability of the portfolio. Using the Sharpe Ratio is one way to compare the relationship of Risk and Reward in following different investment strategies. A strategy with a higher ratio is less risky than one with a lower ratio.

For example, you may have seen lot of advertisements in the market claiming that you can make 100% return in 2 days, or get a return of $10,000 on a $100 investment within two days. Without going into the plausibility of such claims, we can say that you can make a 100% or 200% return on your investment within mere seconds or days, provided you are willing to take high risk.

But how can you get a higher Return with lower risk? This is what Sharpe Ratio is all about: The idea of restructuring your portfolio in such a way to maximize your return by limiting the risk. This means limiting the number of high Beta and higher volatility stocks, and maximizing the return.

The idea is to see how much additional return you can get for the additional volatility of holding risky asset over a risk-free asset. For this you have to compare each of the individual positions of the risk-free asset in your portfolio to your baseline, and find those stocks that have relatively low volatility to the baseline but give you the highest return. The higher the ratio, the better it will be.

44. Portfolio Management: Understanding Beta & Diversification

Intro to Beta:

The Beta for a portfolio is the weighted sum of the individual asset Betas. Hence, you will have to see how much exposure each individual stock will have to the market and what the correlation of the stock movement with the S&P 500 Trust ETF, or SPY.

β

Look at the individual positions that you have in your portfolio. Compare it to SPY ETF in terms of what kind of returns you will have or what kind of movements you will have, and find the correlation between your stock, its position and the market.

A Beta of 1.05- relative to the S&P 500- implies that if the S&P's excess return increases by 10% the portfolio is expected to increase by 10.5%. This means that you have stocks that are more volatile than the market. The higher the Beta, the higher your exposure to the market and the higher are the chances of the individual stocks being sold off at a higher rate than that of the market itself.

Intro to Diversification

Let's see why a holistic approach is necessary when managing a portfolio. You trading plan and trade psychology are very important as they drive everyday decisions. Even though it is natural to have exposure to a given name and be comfortable with it when trading, having too much exposure to the market with regards to the individual positions will harm you severely.

It is important to have tools that can help you understand how much money you may lose in case of a market sell off. Tradespoon always recommends having both Long and Short Options in your portfolio so that the exposure to the market can be minimized. In case of a market sell off, the Short Position will benefit thus decreasing your loss.

Another method by which you can minimize exposure is by looking at the Beta. Beta and Sharpe Ratio helps minimize exposure to the market by trading stocks that have low volatility and relatively low Beta, but provides high return on capital. The third method that can be used is Diversification.

Sector Diversification

We have different tools that help minimize the risk of your overall portfolio. Upon opening an account at Tradespoon, you can create a portfolio using the Portfolio Toolbox which will not only show you the Beta and Sharp Ratio for the overall portfolio, but also the other Greek Analytics such as the overall Delta and Theta.

You obviously do not want to place all your trades into one sector like Technology or Consumer Staples or Utility, because if the interest rate goes up the Utility sector will sell off, and an undiversified portfolio will sustain unnecessary losses. So Diversification is crucial.


Figure 61- Different Ways to Diversify

Depending upon experience, you should have 4-12 positions at any given time, unless of course you are an active day trader. You should also invest in different sectors that are not highly correlated to each other. Consider positions in Utility, Staples, Commodity-related, Technology, Financial, and Healthcare sectors. During a market correction, Utility and Staples outperform the SPY. So if you want to diversify your portfolio and thus minimize your losses during market sell off, consider having exposure to Utility and Staples that not only pay you a steady dividend but also look after your overall risk in case of a market sell-off.

45. Portfolio Management: Position Delta & Position Theta

Position Delta:

You can build a portfolio with Long Stocks or Short Stocks. But if the market sells off, how can you be comfortable with your exposure to the overall market? Or how can you determine the amount of exposure you have to the market at any given time, especially when trading options? When using options, you'll need to determine the exposure that the total sum of all options have to the overall market, and be comfortable with that number. You can manage all of this by using **Delta**.
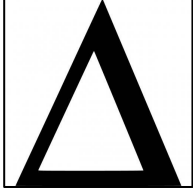
Recall that Delta is a measure of the change in an option's theoretical value, given a $1 change in the underlying stock value. Suppose you have an option position and the underlying stock moves by a dollar. A Delta value will tell you how much the price of the option is expected to change.

The higher the Delta value, the higher the change in the underlying option price. With a positive Delta value, when the stock is up, the position generally gains value and vice versa.

With negative Delta, the position gains value when the stock is down and the position loses value when the stock is up. So a positive Delta means you are bullish on the position, and negative Delta means you are bearish on the underlying stock

Position Delta represents two very important things - Directional Bias and Portfolio Risk. Sum up all the Deltas across all the individual contracts to determine position delta. The turn over number will give you a good approximation of how much money you will make if you are bullish and have a positive Delta. It will also give you a feeling of how much exposure you have if the market sells off. This is very important because, in case you have too much exposure, you can build diversification techniques that can help you minimize that exposure.

Position Theta

A Long/Short Equity Fund will build a portfolio with Long Stocks and Short Stocks. The extent of exposure to the market can be determined by looking at Beta. On the other hand, if you are trading in options, then the total exposure of your options positions to the market can be determined by looking at Position Delta that shows you the Risk. Position Theta, however, shows you how much time decay you have in your portfolio.
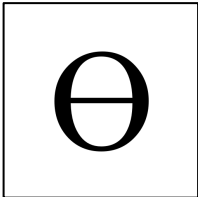
Theta is the change in an option's value given a one-day change in time. An option will lose money every single day because of their exposure to time decay. In the case of a Short Option, that is either Short Call or Short Put, you will benefit from time decay because the option premium will decrease.

While all options lose value over time, the rate at which an individual option loses value is not linear and is primarily a function of how much time remains until expiration. The rate of decay usually increases as we near expiration. This is why options tend to lose the most in value in the final 30 days due to the acceleration in the price decay.

Position Theta is expressed as a negative number that indicates how much your account can lose or make on a daily basis due to time decay. A positive Theta value is when you benefit from time decay and is the ideal time to sell options. Theta has an inverse relationship with Gamma. Long Options usually have positive Gamma and negative Theta, as they benefit from the increase in Implied Volatility, and will lose value due of Theta.

Since the time remaining on an option can never increase, time decay is a one-way street - you will always lose money as time passes if you are long on the contract. If the stock does not move, the value of the option will approach zero as long as it remains out-of-the-money. You have to keep this in mind when you buy Long Options or have Short Options in your portfolio. Again, it is very important to look at the overall portfolio, and see if it benefits from the time decay or if you are actually exposed by the time decay.

46. Review: Entry & Exit Points

Introduction:

You could be very good at picking the right stocks, predicting the trend, and executing the right strategy, but if you do not have a defined set of rules of when to get into a position or when to get out of it, you may still lose money. So, define and follow a set of rules on when to Enter into a position or when to Exit from it.

Decide beforehand on how much money to allocate for each trade and avoid putting more than 5% of your portfolio into any one position. You should always be comfortable with Portfolio Drawdown and develop your Portfolio Management Skills by looking at the various Portfolio Management Tools found at Tradespoon. Good traders are disciplined traders. Know exactly how much money you might lose at any given position and what your maximum return for that position can be. Never compromise on those numbers. Follow the golden rule of 'trade small and trade often' to take advantage of Statistical Analysis such as Probability of Success and Implied Volatility.

Rules for Entering a Position

Before entering into a position, look at the Tradespoon tools that show the Support and Resistance of the stock or trade in question. Tools like Seasonal Charts can show you trends and their reversal from a seasonal perspective. It can also show the short-term bias in the stock based on Tradespoon's neural networks - whether it is going to go upwards, downwards or will remain unchanged. Buy weakness and sell strength. Always make sure that the monthly Trading Plan goals are achievable and are not adversely affected by your getting into a new position.

Rules for Exiting a Position

The Probability of Success decreases as expiration approaches. It is always better to sell an open position if the underlying asset has moved in the anticipated direction, instead of waiting till the Expiration Date to do so. For this same reason, always close your option position 5-20 days prior to expiration. If a stock goes against you, always try and limit your losses to no more than 50% of the maximum risk you took on any given option position. And again, always remember to buy on weakness because that gives you more opportunity to gain by selling off during periods of market strength.

47. Review: Monthly Return Goals & Slippage

Introduction:

Create a Trading Plan based on your net worth, risk tolerance, and age. Always remember that we at Tradespoon do not know who you are and what your background is. We can only show you what we do at Tradespoon using our own portfolio based on our risk tolerance. Consult your registered financial advisor before making any trading decisions. If you do not have a financial advisor, we encourage you find one by visiting moneyblock.com or any other institution that provides financial advisor help.

Trading Plan Checklist

• Be comfortable with Maximum Drawdown if 20% market correction occurs.

• Never allocate more than 3-5% per trade.

• Close Position if return reaches X%. The cutoff for Tradespoon Portfolio is 20-30%.

• Close Position if underlying Stock gained 3-5% value in a week or less.

• Close Position to limit your losses to 50% if a Position goes against you.

Understanding Slippage

Slippage is the difference between the recommended price of a Trade and the price at which the trade is actually executed. Tradespoon provides you with daily trade recommendations and informs you of the Entry Prices effective at the end of each day. When the market opens the next day, sometimes you may get at a better price and sometimes you may get a worse price. An SMS or E-mail alert will inform you of any changes.

But sometimes, based on your portfolio and your risk tolerance, you can do this yourself. If you have exposure to the market and if you are fully allocated, then you do not want to take any slippage. You will probably want to raise the cash and sell your position. If you have above 50% cash and you want to participate in some of these recommendations, then you can allow 10% slippage on our trade recommendations. The most important consideration here is cash: if you are not over-leveraged, allow slippage. If you do not have, say 30% in cash, avoid it.

Keep in mind that the Tradespoon performance page shows the Close Price effective when the market closed. Ultimately, when the market opens the next day, it is you who will have to decide whether you can get a better price than what we have recommend or allow a 10% Slippage.

The general theme here is your risk tolerance. Be patient and let the market come to you, especially when your Trading Plan drives decisions. If you are targeting X% return per month, and getting close to the target, be patient. If you want to initiate a bullish position and the market happens to be overboard, give it some time to let the market come in your direction and you will get fill at a better price.

Even though Slippage is allowed if portfolio cash is greater than 30%, you need to have 30% of your portfolio for rolling your Spreads or mitigating the risk in your account or repairing some of the positions that went against you. This, again, depends on your personal risk tolerance and trader psychology.

Capturing 5% Monthly Returns

Our personal goal is to reach 5% return each month. In order to achieve this, based on our philosophy, we will be doing the following:

• On every trade we place, we will be using Options Spreads Strategy that has a Probability of Success of 60-80%.

• We base our strategy on Implied Volatility. That is, when the Implied Volatility is high, we sell options and when the Implied Volatility is low, we will buy options.

• We always look at the Return on Capital and make sure that, for every Option Spread Strategy and Option Spread Positions, we can achieve 20-51% ROC.

• We also look at Liquidity and underlying Stock volume.

• We constantly seek Cost Basis Reduction, not only in our own account, but we also send alert SMS messages to all our users on how to hedge their positions.

• We seek 67% winners, meaning that for every two winners, we are accounting for one losing trade.

• As long as we keep the amount of winners equal to the amount of the losing trade, we can consistently grow our portfolio roughly anywhere between 3-5%.

Introduction to Margins:

You can buy stocks and options using cash or you can Margin, that is, you can borrow from your broker dealer. This process of borrowing from the broker dealer is called Margin Requirements. You can get a two-to-one leverage on stock trades and a one-to-one leverage on options trades, and will be charged an interest on the money you have borrowed. Usually, this is 3-6%, which is quite higher than the normal interest rate now.

Requirements

You will effectively be paying much more than normally necessary to the lender, and naturally as the interest rate increases- so will the sum you have to pay. It is always better to avoid borrowing from the broker dealer and always try to pay in cash. It is especially better if you are a novice in the trading business and have only a couple of years of experience, or if you are not an actual trader. Also keep in mind that, if you open and close positions several times during a day, you could get yourself restricted from trading.

Another aspect to be aware of is that the broker dealer might liquidate your position, without prior consent, if your equity drops below 50%, or 75% in some cases. This process is called Margin Call and is done in order to bolster their chances of being repaid. So it is most likely that, during market sell-off, the broker dealer will liquidate your position regardless of whether it is profitable or not. All in all Margin Requirements can give you a sense of how much exposure you have to the market in case of a sell-off.

Options Requirements

If you trade options, your broker deal will always hold money on the side for any strategies that can create limited or unlimited risks. This process of setting aside money is called Option Requirement. When you sell Short Puts or Short Calls, or when doing Debit Spreads or Credit Spreads, at certain point if the market sells off or goes against you, you may sustain losses for the given position. So, the broker deal goes through a process of looking at all your positions and analyzing how much money you may lose if the market goes against you.

Normally Short Puts and Short Calls have higher requirements, usually in the order of greater that 20% of your Strike Price. On the other hand, Calendar Spreads do not require any Option Requirements as no amount will be set aside. Debit Spreads do not need any requirement as the debit is paid up front. For Credit Spreads, the requirement is the difference in the Strike Price and the credit received during the trade.

Return on Capital is the most important part of the Trading Plan. Since the broker deal will always be holding money on the side, you cannot leverage that money if you wait until expiration. So it is always better to keep in mind what your targeted Return on Capital and to close your position before expiration once it is reached.

In order to avoid trading on your impulses, especially when the market goes against you, you have to keep in mind the Maximum Drawdown of your portfolio. Option Requirements can be a great proxy for determining how much money you may lose as a result of market sell-off. So, always pay attention to Option Requirements when trading.

Monthly Account Value

Account Value is the sum aggregate of all the cash you have in your account, plus all the Equities or Assets that you have in your account. With options, it is the sum of all option values across Long and Short Positions, plus the cash in your account. Any Margin Requirements or Option Requirements will not be added to the Account Value. So basically, Account Value can be summarized as Cash plus Equity minus Requirements.

The monthly changes in Account Value determines the Trading Plan. If you are looking for 3-5% monthly return on your equity, you have to calculate the Return on Capital for each given trade and keep an eye on the Account Value as it changes every week. As soon as you reach your target for the months, you have to be more defensive and preserve your Account Value. When the next month starts, you can take more risks and follow an aggressive Options Strategy.

Always avoid negative cash caused due to interest payments and avoid buying on Margin. And remember that opening or closing a stock position within 60 days can result in tax consequences. Keep this in mind when determining which trades to close.

49. How to Place a Stock Order

Preliminary Steps

- **Step 1:** Know what stocks to trade and be correct on market direction.
- **Step 2:** Find a stock that you want to trade, and find Support and Resistance Level.
- **Step 3:** Identify a correct strategy, that is, whether to trade in Stocks, Options, or Spreads. The mechanics of the trade are needed to open the position.

Order Entry

To place a Stock Order through your TradingBlock account or any other brokerage account, follow these steps:

1. Start a basic market order for any company.

2. Select whether you would like to place an order to Buy or Sell. For this example, we will place a Buy order.

3. Next, type in the number of shares.

4. After entering the number of shares, enter the Stock symbol, which for this particular example is X.

5. Now select the Order Type. The different types of Order are:

   a. **Market Order:** This will execute at the current market bid or offer.

   b. **Limit Order**: Will ensure that the order is being executed at a Limit Price of your choice, by executing at a price you specify.

   c. **Stop Order:** Will trigger order to exchange once the market reaches a price of your choice. Stop Orders are very popular during sell-offs, as it makes sure that you are getting at least a price of your preference, thus minimizing losses on your Position.

   *As a rule, avoid Market Orders and use Limit Orders instead.

6. The final step is the 'Time in Force or Duration' you would like to place on your order type. Since Market Orders can be good only for that particular day, usually, especially when you want to close a position, you have put a criteria such as the GTC (Good to Cancel) Order, indicating that you are waiting for your Limit Price to get executed, even if it takes more than a day to do so.

Points to Consider

- Avoid Market Orders.

- Always place Stop Orders to limit losses especially on established Positions.

- Place GTC Limit Order to suit your Trading Plan. As soon as you enter a Position, place a GTC Order to close your Position.

- Review all your Open Orders on a daily basis.

- Adjust Limit Prices to capture your Target Gain.

- Place Limit Orders to minimize your losses.

50. Options Orders Through TradingBlock

Order Entry

To place an Options Order through a TradingBlock account, follow these steps:

1. Click on the Trade tab. In the next few steps, enter a basic market order for any company.

2. Select whether you would like to place an order to Buy or Sell. For this example, we will place a Buy order.

3. Next, type in the number of contracts.

4. After entering the number of contracts, enter the Option symbol based on the Strike selection and the Expiration Month selection.

5. Now select the Order Type. The different types of Order are:

   a. **Market Order:** This will execute the Order immediately at the current market bid or offer.

   b. **Limit Order**: Will ensure that the order is being executed at a Limit Price of your choice, by executing at a price you specify.

   c. **Stop Order**: Will trigger order to exchange once the market reaches a price of your choice. Stop Orders are very popular during sell-offs, as it makes sure that you are getting at least a price of your preference, thus minimizing losses on your Position.

   *Avoid Market Orders and use Limit Orders instead.

6. The final step is the 'Time in Force or Duration' you would like to place on your order type. Since Market Orders can be good only for that particular day, usually, especially when you want to close a Position, you have put a criteria such as the GTC (Good to Cancel) Order, indicating that you are waiting for your Limit Price to get executed, even if it takes more than a day to do so.

Mechanics of Order Placement

In order to place an Options trade:

- Enter a symbol.
- Select the Expiration Date.
- Select the Strike Price.
- Enter the number of contracts.
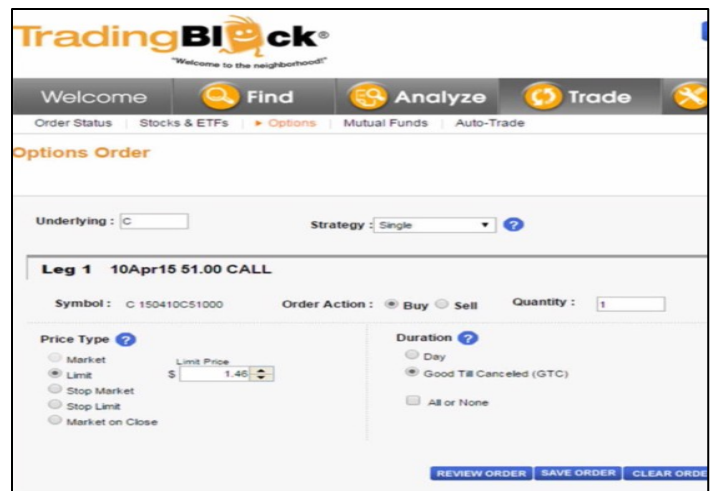- Specify the Order Type.
- Select the Duration.

Figure 63: TradingBlock Options Order Entry Screen

Points to Consider

- Avoid Market Orders.
- Select the Expiration Month based on your time horizon. Having 50-75 days until Expiration is ideal.
- Specify the Strike Price based on the Probability Calculator.
- Place GTC Limit Order to suit your Trading Plan.
- Review all your Open Orders on a daily basis.
- Adjust Limit Prices to capture your Target Gain.
- Place Limit Orders to minimize your losses.

51. Spread Orders Through TradingBlock

Order Entry

Continuing the discussion on how to execute different trades, we will move on to more Advanced Option Strategies such as two legged and three legged strategies, which help in Cost Basis Reduction.

To place an Options Order through a TradingBlock account, follow these steps:

1. Click on the Trade tab. In the next few steps, enter a basic market order for any company.

2. Specify the type of Option Spread Order to use like Vertical, Calendar, or Butterfly.

3. Select whether you would like to place an order to Buy or Sell. For this example, we will place a Buy order.

4. Next, type in the number of contracts you would like to purchase.

5. After entering the number of contracts, enter the Option symbol for both legs of the order.

6. Now select the Order Type. The different types of Order are:
    a. **Market Order**: This will execute the Order immediately at the current market bid or offer.
    b. **Limit Order:** Will ensure that the order is being executed at a Limit Price of your choice, by executing at a price you specify.
    c. **Stop Order:** Will trigger order to exchange once the market reaches a price of your choice. Stop Orders are very popular during sell-offs, as it makes sure that you are getting at least a price of your preference, thus minimizing losses on your Position.

    Avoid Market Orders and use Limit Orders instead.

7. The final step is the 'Time in Force or Duration' you would like to place on your order type. Since Market Orders can be good only for that particular day, usually, especially when you want to close a position, you have put a criteria such as the GTC (Good to Cancel) Order, indicating that you are waiting for your Limit Price to get executed, even if it takes more than a day to do so.

Mechanics of Order Entry

In order to place an Options trade:

• Enter a symbol for both legs

• Select the Expiration Date.

• Select the Strike Price for both legs.

• Enter the number of contracts.

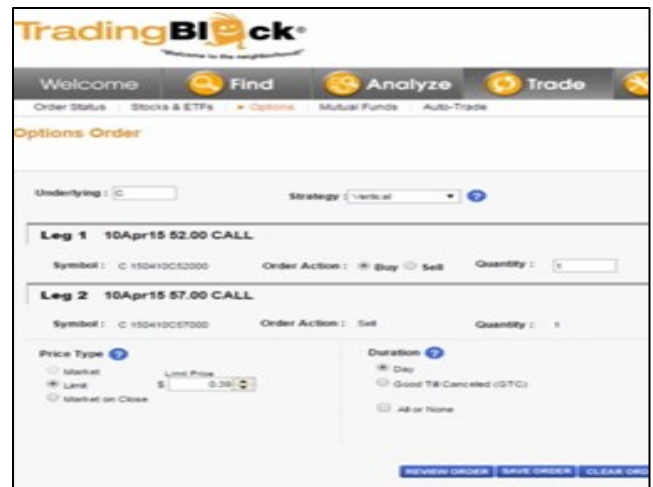• Specify the Order Type.

• Select the Duration.

Points to Consider

Figure 64: TradingBlock Spread Order

• Avoid Market Orders.

• Select the Expiration Month based on your time horizon. Having 50-75 days until Expiration is ideal.

• Specify the Strike Price based on the Probability Calculator.

• Place GTC Limit Order to suit your Trading Plan.

• Review all your Open Orders on a daily basis.

• Adjust Limit Prices to capture your Target Gain.

• Place Limit Orders to minimize your losses.

52. Assignment Risks & Expiration

Introduction:

All trades have an associated timeframe. In the world of options, the time horizon is never longer than the Expiration Date. This means that you have to be correct, not only on the direction of the market, but also on the direction of the market by a certain time. If you make a wrong call even one week prior to the Expiration Date, you can get assigned stock by your broker or dealer if you're short an in-the-money contract heading into the expiration. This is called Option Assignment.

The broker or dealer can Short Call into Short Stock and Short Put into Long Stock, as need be. This means that you have unlimited risk potentially associated when trading in long options. Meanwhile, in-the-money puts and calls are subject to auto-exercise at expiration. If not closed, long calls and long puts that are ITM, even by a mere penny, are automatically exercised.

When to Close a Position

- **5 to 20 days prior to Expiration:** You might want to close a position prior to expiration. For example, if you happen to be holding short puts on 'Google', you could get assignment shares of Google. If you do not want to own the shares of Google, you can prevent the assignment by closing your options positions, say 5-20 days prior to Expiration Date.

- **When Target Gain or Loss is reached**: Stick with your Trading Plan and to close your position once Target Gain or Loss is reached. In such cases you have to be proactive and should not wait till Expiration.

- **Stock goes against you:** You have to close your position if the stock goes against you.

- **Tradespoon predictions changes:** It is advisable to close the position if the Tradespoon prediction for the position changes, even if you are bullish on the stock. Tradespoon provides you with trade recommendations on a daily basis, which will indicate Uptrend or Downtrend for Options based on Tradespoon's analytics. But a binary event during the day can change our prediction. So it is better to close the position once the Tradespoon prediction changes, especially if you are getting close to expiration.

Always make sure to avoid Assignments, and close your position in order to do so. Also, always evaluate the Probability of the Stock reaching your targeted gain. Suppose if there is a Probability of reaching or surpassing the Target Gain prior to the Expiration Date, then it is better to close the position before expiration. It is always better to close the position once the stock moves 3-5% in your direction.

Assignment Risk

As we have seen Option Assignment always involves risk. If you do get assigned, make sure to close your position the very next day, unless of course you want to hold the stock for a long term. You could sustain big losses if you have Short Stock and it increases 100% or goes to infinity while you have unloaded risk. You can sustain unlimited losses if you have a long position and the stock drops to zero. So, always hedge your positions, and close them when applicable, in order to avoid unlimited and undue losses.

What to Do at Expiration

As we have already seen, all trades have an associated time frame, and in this equity options market, it is referred to as the Expiration Date. This is when your option contract will expire and it will either become worthless or if you might assigned in a stock, which could be potentially harmful. So always keep track of when your Position is going to expire. Weekly options expire on Fridays and monthly options expire on the third Friday of every month.

Option premiums decay the most 1-15 days prior to Expiration, due to Theta decay acceleration. Usually a short option will have a higher Theta meaning faster decay as you get close to the Expiration Date.

Option prices are highly correlated to the stock prices as you get closer to the Expiration Date, especially in-the-money options. So, the week prior to expiration, you will have very high Gamma and your ITM or near-the-money option will start to move very quickly. Since you do not have a lot of option premium, your Theta will increase and hence there will be decay in the option prices, leading to a higher Gamma and increased movement of the option. This shows that options move the same way as stocks.

Rule of Thumb

Close your option position 5-20 days prior to Expiration. Also close the position once the Target Gain or Loss is reached, or if the stock goes against you or when the Tradespoon prediction changes. And always close the position once the stock moves 3-5% in your direction.

Risk denoted by High Gamma indicates that options will move the same way as stocks as you get closer to the Expiration Date. For shorter options this is great as there is a higher time decay indicating a higher Theta. But for long option, this is not good as the premium will decay erratically as we near expiration.

Conclusion

If you've come this far, your head is probably ready to explode! Congratulations. You have learned a lot. It might take some time to digest everything and put into practice. We highly encourage you to practice or "paper" trade before executing live trades. Familiarize yourself with the tools, read the daily email and watch the videos, follow the open positions, and, have fun.

Please feel free to contact us at info@tradespoon.com with any follow up questions.

About Tradespoon

Tradespoon is the brainchild of CEO Vlad Karpel, formerly Head of Technology at OptionsXpress, and is driven by trading industry veterans with expertise in money management, trading technologies and quant models. For more than 15 years, Vlad has honed the underlying algorithm of the Tradespoon platform to power the most sophisticated trading system on the market.

Vlad Karpel
CEO & Founder, Tradespoon