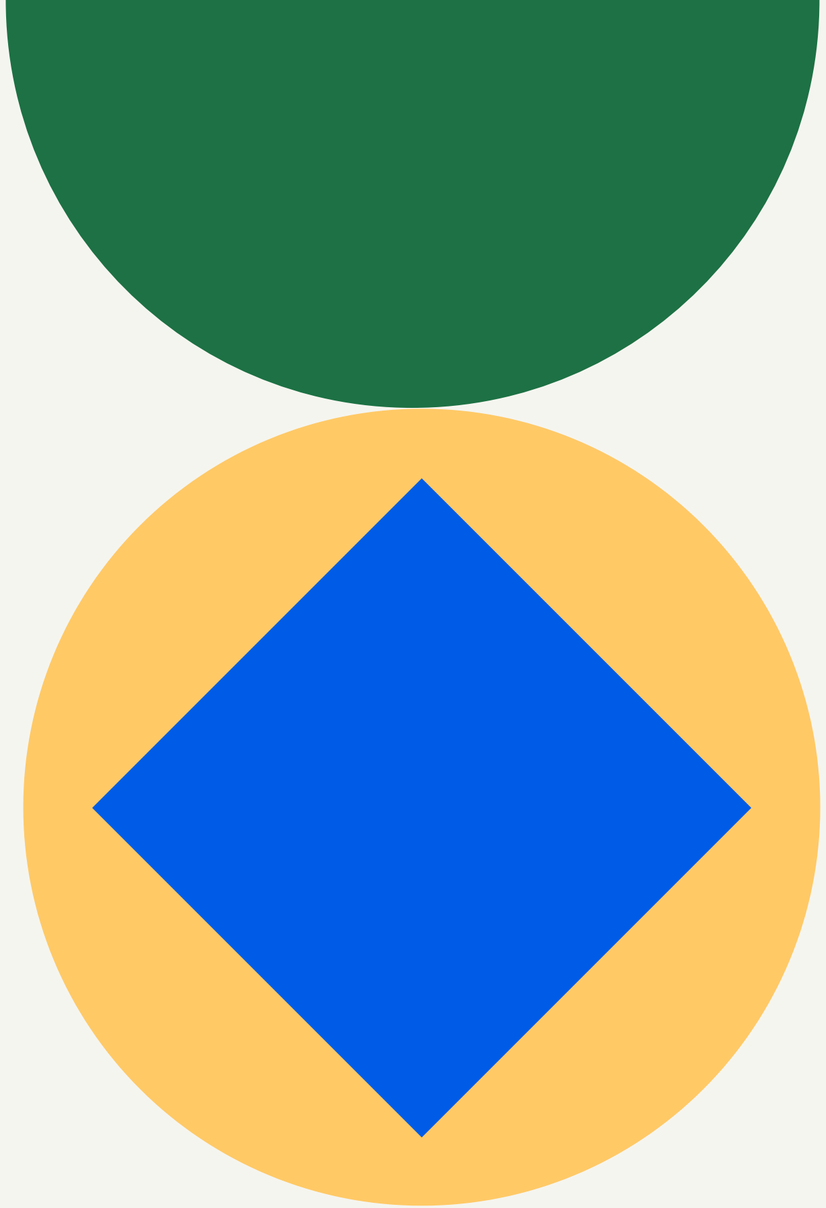
From Theory To Practice

Expressing your opinion strategically
using options.



Abstract

In the following presentation, we will (1) lay the grounds out for our conversation, (2) discuss what moves the market, (3) reveal what products exist to express or hedge your opinion, as well as (4) explain why and how you can use complex products to express your opinion efficiently.

Takeaway: Strategy is a key pillar in successful trading.

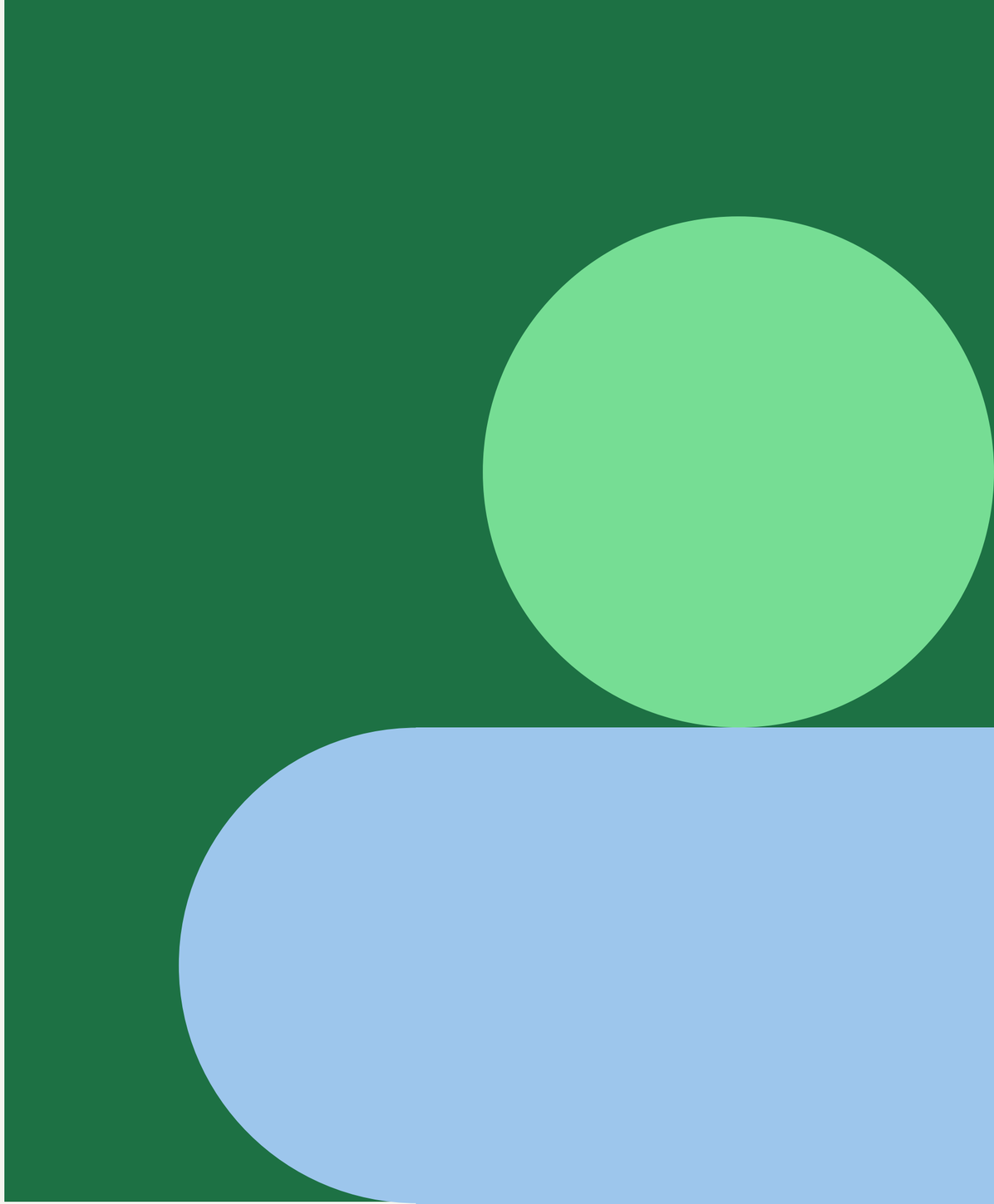
With an understanding of how the market works as well as strategies available, you may be able to derive a fair return.

May 2021

Introduction

— PART 1

BENZINGA + PHYSIK INVEST



Topic Of Discussion

We're on the heels of a period in which **retail trading volumes hit records**, fueled in part by the commission-free trading revolution and COVID-19 coronavirus pandemic.

Trading actively is a rather sexy concept, most would agree. It's a powerful coming together of freedom and commitment. Only **you are in control of your destiny**.

However, trading is difficult and **most fail**.

Why? Emotion, as well as a **lack of direction and understanding**, are major factors.

Today, we will provide you direction and understanding.

Objectives

WHAT WE WANT TO ACHIEVE

Unpack Market Drivers And Products

Reveal Tools To Express Your Opinion

Explain Why And How These Tools Can Increase Your Edge

May 2021

Market Drivers And Products

— PART 2

BENZINGA + PHYSIK INVEST

Purpose Of A Market?

Facilitate trade.

Who Are The Participants?

Market makers (known as liquidity providers), investors, speculators, and hedgers.

What Moves A Market?

Imbalances in supply and demand are ultimately the factors that cause prices to move. For every buyer, there is a seller. When one participant is more aggressive, the price moves.

Types Of Markets

STOCK

Businesses can raise capital and provide shareholders liquidity, so that ownership can be exchanged at low cost, with ease.

BOND

Where participants can issue, buy, and sell debt securities.

COMMODITY

Where participants can buy and sell commodities like gold, oil, cocoa, sugar, and the like.

CURRENCY

Where participants can buy, sell, and exchange currencies.

DERIVATIVES

Where participants can buy and sell assets indirectly, often times with leverage.

Types Of Derivatives

FUTURE

Agreement over the obligatory purchase and delivery of an underlying asset at an agreed-upon price and future date.

OPTION

Agreement over the non-obligatory purchase and delivery of an underlying asset at an agreed-upon price at a future date.

FORWARD

A non-standard future that trades over-the-counter (OTC).

SWAP

Agreement over an asset's benefits (e.g., cash flow) at predetermined date.

Why Talk Derivatives? They're big.

According to Visual Capitalist, the derivatives market has a notional value* of anywhere between $550.5 trillion to $1 quadrillion. The actual statistic is obscure due to how difficult it is to account for bespoke derivatives and the like.

For comparison, across all global stock exchanges, market capitalization is about $89.5 trillion.

So, why derivatives? Efficiency.

*Notional Value: The total position value, or the value a position controls.

May 2021

Options Unpacked

— PART 3

BENZINGA + PHYSIK INVEST

First, An Analogy

THE BUSINESS OF INSURANCE

Insurance companies make money by calculating expected probabilities and writing overpriced policies.

When you get insurance, you need to disclose a lot of information. Actuaries take this information, plug it into their models, and predict the expectancy of some event.

The ultimate goal is to write as many policies as possible to lower the risk of one single event leading to an uncoverable liquidation.

Options Defined

THE BASICS

OPTION

To recap, options provide participants the opportunity to trade an underlying asset at a specified price, at some later date.

Though options are to be looked at as insurance, they provide holders the ability to speculate, also.

CALL

The right to buy an underlying asset, at a specified price (i.e., strike price) at expiration.

Example: A participant buys a $100 strike call on XYZ.

This exposure can hedge an existing short position or serve as a speculative directional bet on upside.

PUT

The right to sell an underlying asset, at a specified price (i.e., strike price) at expiration.

Example: A participant buys a $100 strike put on XYZ.

This exposure can hedge an existing long position or serve as a speculative directional bet on downside.

Pricing Insurance

BACK TO PARALLELS

How to charge for insurance?

An event can either (A) occur or (B) not occur.

Say the probability of (A) is 1% while (B), 99%.

If (A), then the payout is $100,000. If (B), then the payout is $0.

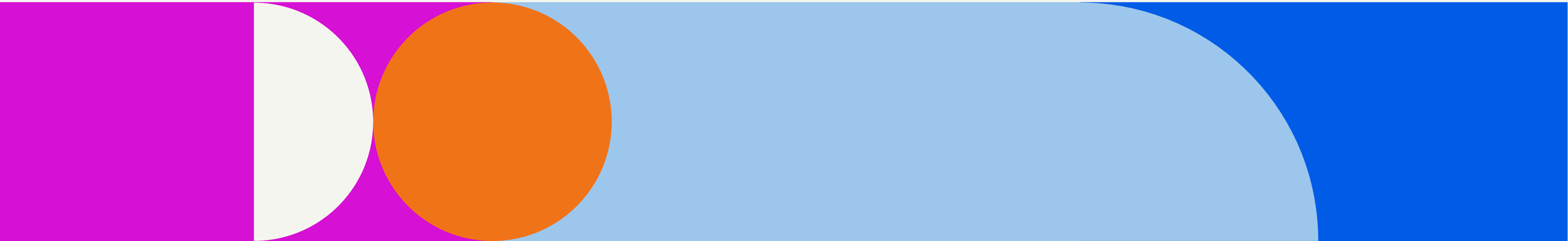
What Do You Charge To Break-Even?

$100,000 * 1% + $0 * 99% = **$1,000** Expected Value Per Policy

What Do You Charge To Make Money?

Premium - Expected Value = Profit

$2,000 - $1,000 = **$1000**



Pricing Options

BACK TO DERIVATIVES

How to charge for options?

So, an event can be either (A) ITM or (B) OTM.*

Say the probability of (A) is 1% while (B), 99%.

If (A), then the payout is $100,000. If (B), then the payout is $0.

What Do You Charge To Break-Even?

$100,000 * 1% + $0 * 99% = **$1,000** Expected Value Per Policy

What Do You Charge To Make Money?

Premium - Expected Value = Profit

$2,000 - $1,000 = **$1000**

*AN ASSET CAN EITHER BE "IN THE MONEY" (ITM) AND HAVE VALUE, OR BE "OUT OF THE MONEY" (OTM) AND HAVE NO VALUE.

Option Price Inputs

SPOT PRICE

Price of asset, currently.

STRIKE PRICE

Price where option becomes valuable.

TIME TO MATURITY

The amount of time till expiration.

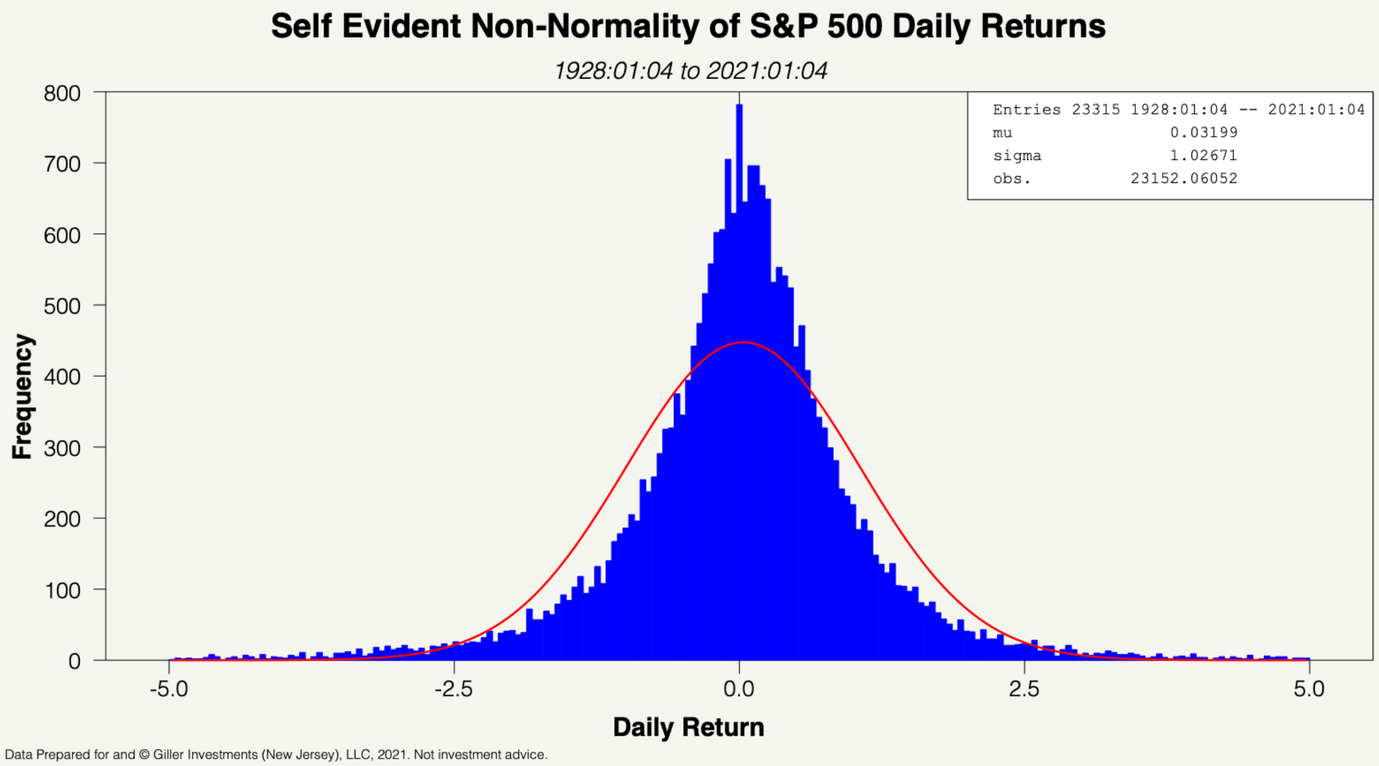
VOLATILITY

Magnitude of potential price change.

RATE OF INTEREST

Risk-free one-year Treasury rate.

Premise



Graphic from Graham Giller's Medium Post titled "Adapting Granger Causality for the Reality of Markets"

Time

DURATION OF OPTION

The more time to expiry, the higher potential for movement up (or down) to the strike price.

Implied Volatility

ESTIMATE OF FUTURE MOVEMENT

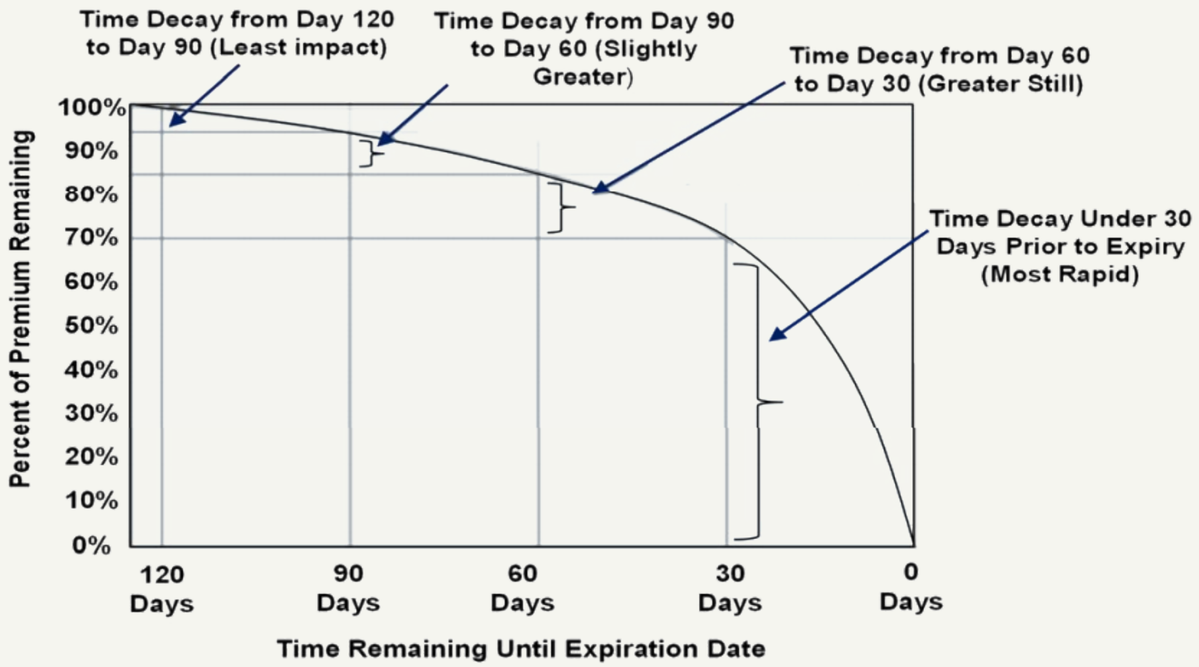
The magnitude of potential price change given the fear of movement.

When a market is fearful, the demand for protection (or speculative exposure) bids option prices.

Key Variables

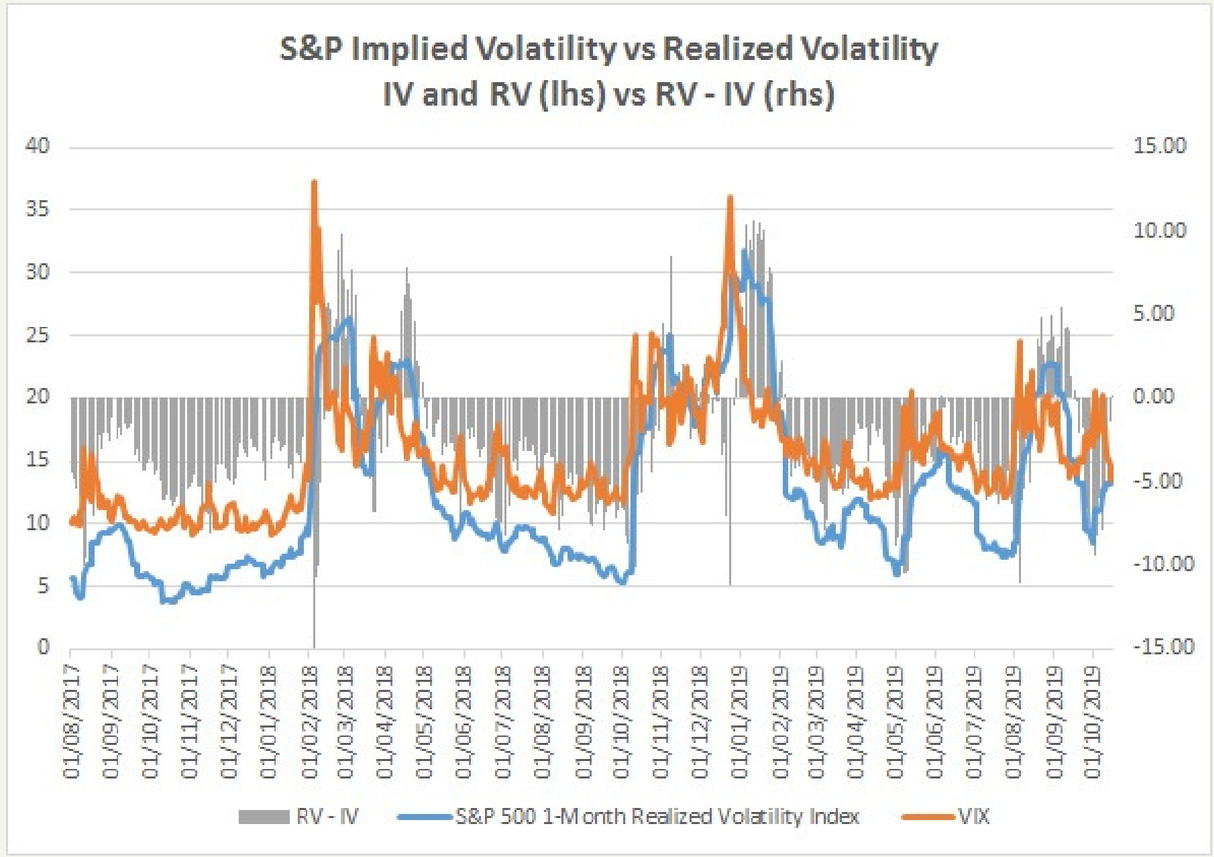
The more time to expiration or the more volatile an asset, the higher the price of an option, all else equal.

Volatility and time are your edges.



Graphic from Rosen Capital Advisors.

The decay of an option over its lifecycle.



Graphic from Dupont Trading article titled: "Realized Volatility vs Implied Volatility. Where are we?

The difference between what participants imply volatility will be versus what volatility actually is.

Direction

"50/50"

Recency bias gives greater importance to more recent events. If the market is up over the last two weeks, then it will continue higher into the future.

Time + Volatility

EDGE

Market participants can express their opinions using options strategically, given the rapid decay of short-dated options and increased volatility of the price changes.

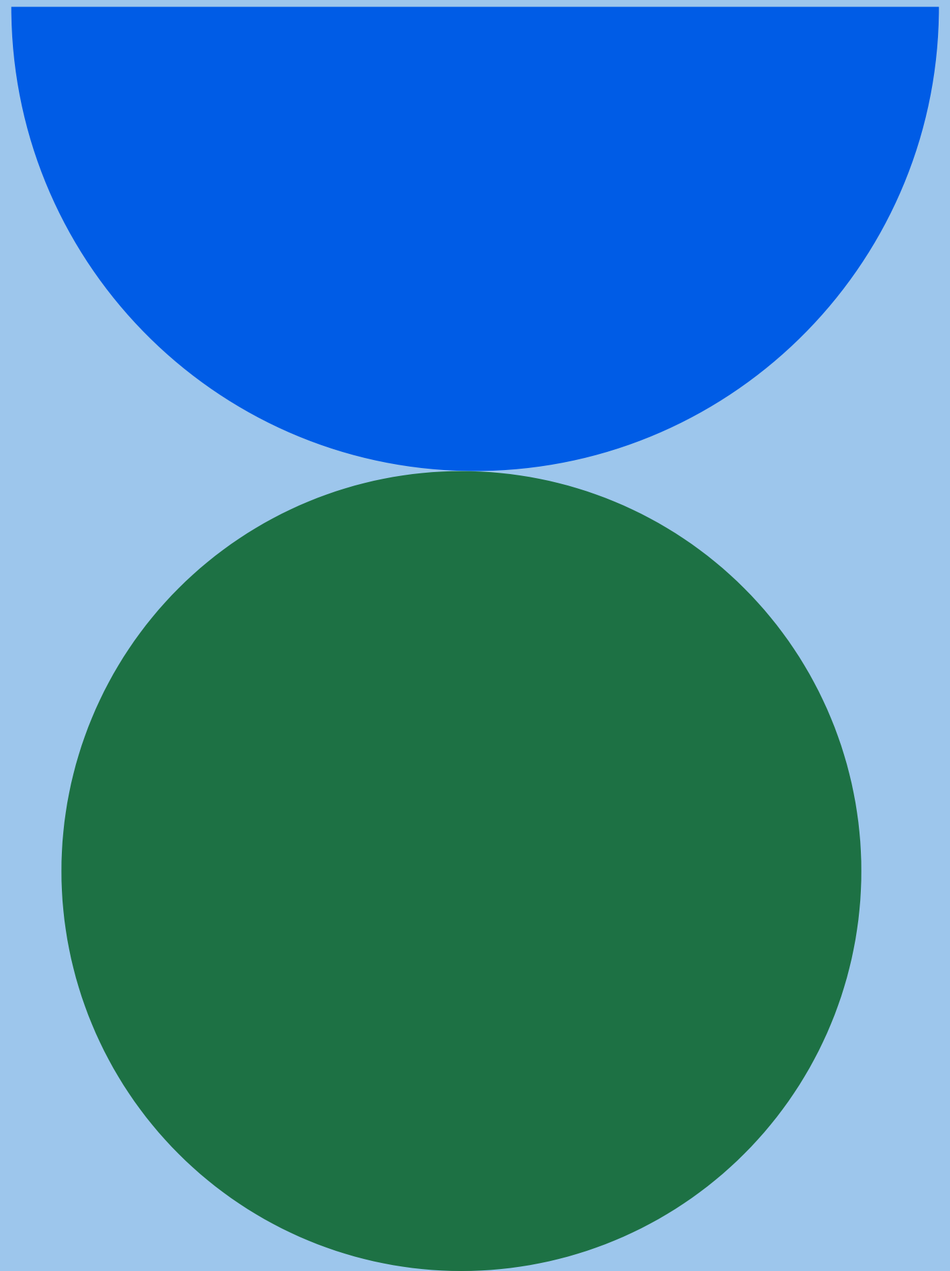
We call this leveraging the dynamic components of option pricing to your advantage.

Key Takeaways

Direction isn't a guarantee.

Time will never stop.

Fear is likely overpriced.



May 2021

From Theory To Practice

— PART 4

BENZINGA + PHYSIK INVEST

Preface

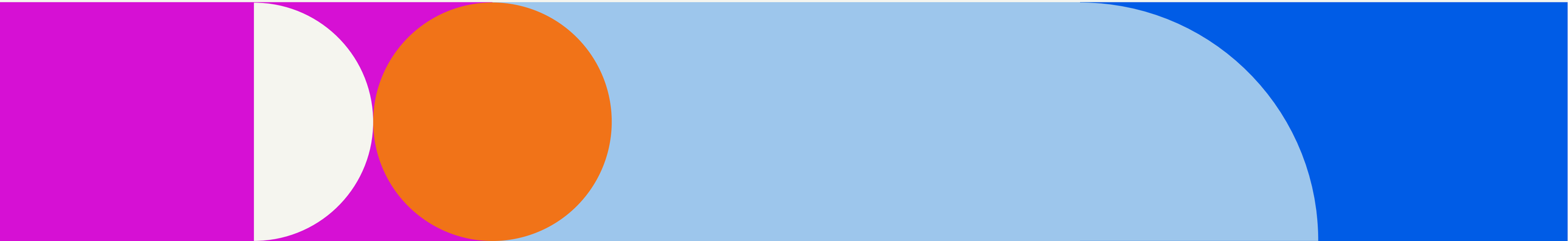
A NOTE TO CHANGING MARKET STRUCTURE

The market for derivatives is bigger than ever before.

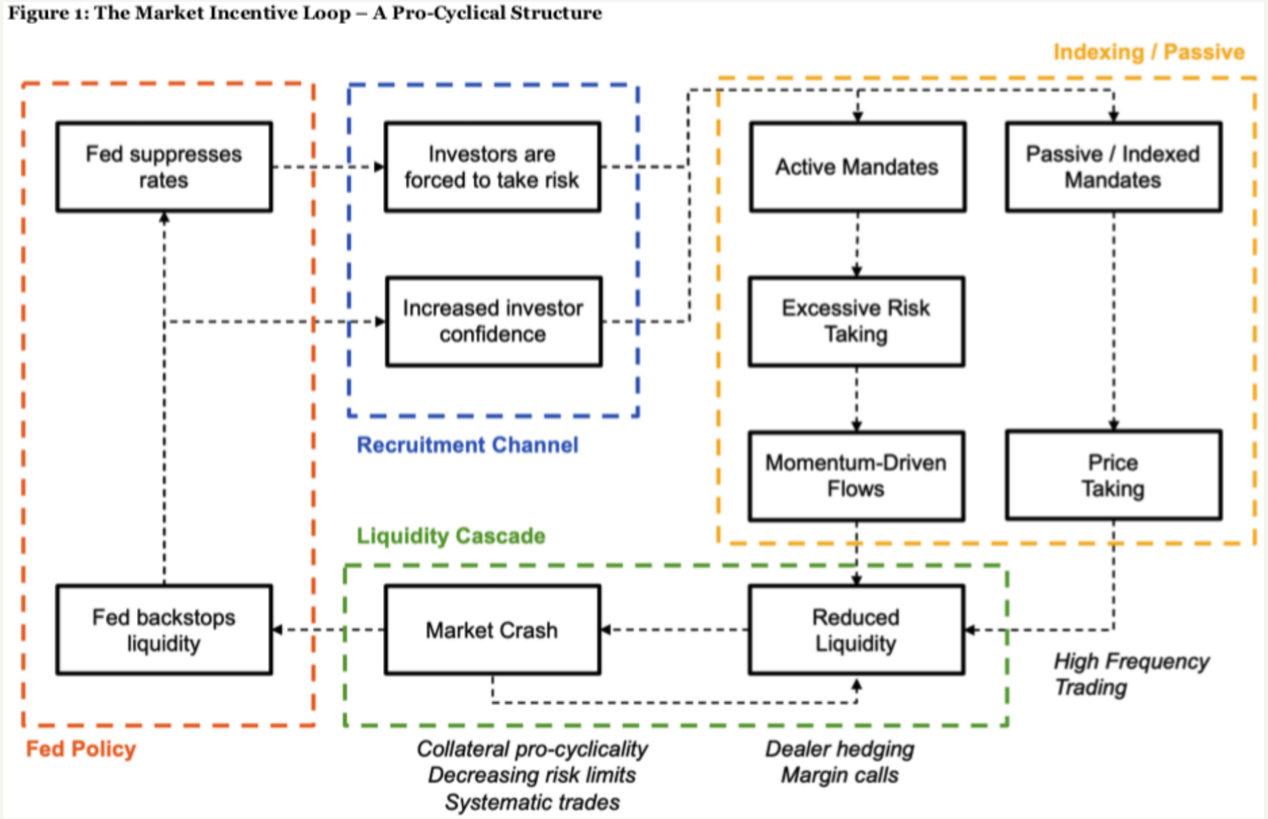
Participants are increasingly leveraged and reflexive. *Why?* Here's a statement from Kris Sidial of Ambrus Group.

"The growth of structured products, passive investing, the regulatory standpoint that's been implemented with Dodd-Frank and dealers needing to hedge off their risk more frequently than not" are all part of a regime change that's affected the stability of markets.

"These dislocations happen quite frequently in small windows, and it offers the potential for large outlier events," like the equity bust and boom of 2020.



"The Market Incentive Loop"



Graphic: Newfound Research unpacks market drivers, implications of liquidity.

Crashing Up And Down

MORE ON CHANGING MARKET STRUCTURE

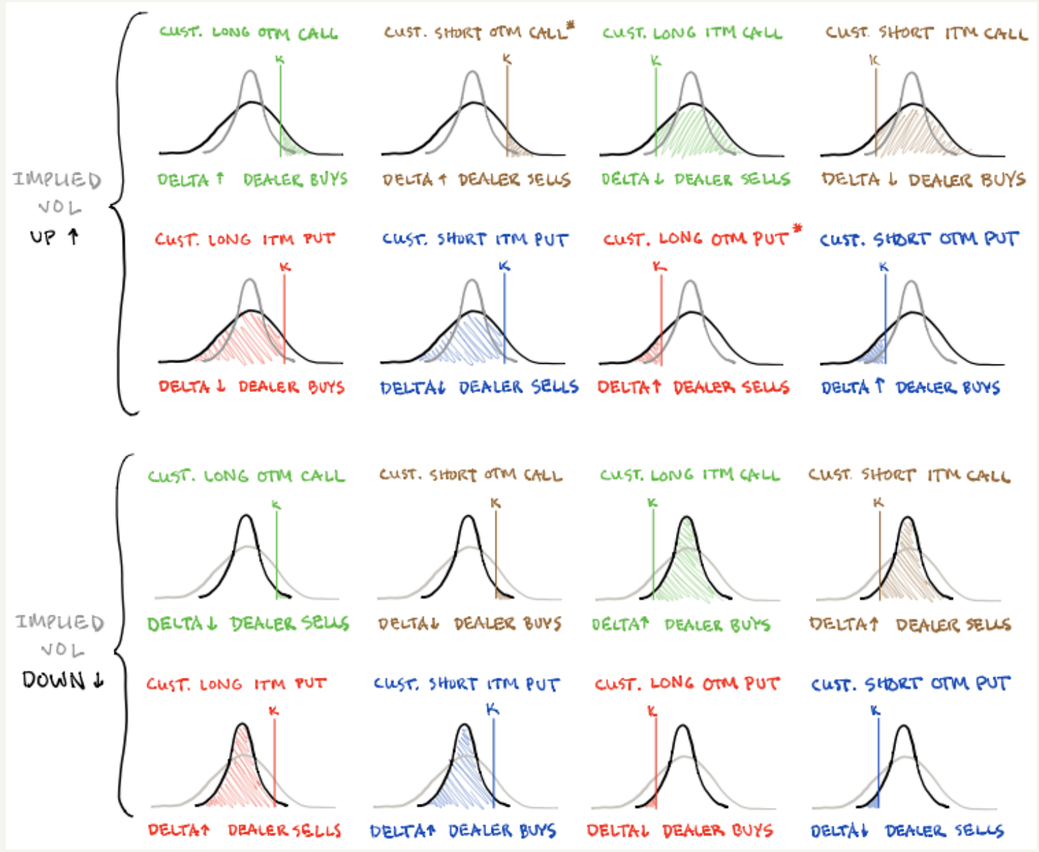
Dynamics of dealers' risk exposure to direction and volatility causes violent crash dynamics to transpire.

In 2020, one-sidedness in the market by yield-seeking participants like target-date funds — such as mutual funds — selling far out-of-the-money puts on the S&P 500 exacerbated volatility. So did customers looking to buy puts in an increasing fashion for downside exposure.

"As people reach for those downside puts on SPX, it now reflexively has another implication on increasing volatility. Well, all those people that are carrying short volatility exposure in their book are losing money." - Sidial

In all, a new regime with knock-on effects is forming solely due to positioning in the market.

If/Then: Reflexivity Visualized



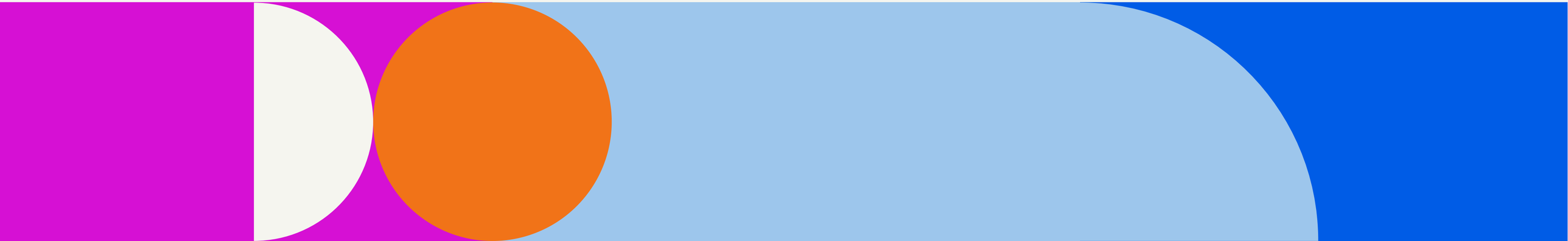
Graphic: SqueezeMetrics highlights implications of volatility, direction and moneyness.

If You're A Small Trader, Run From Carry!

MORE ON CHANGING MARKET STRUCTURE

"The relationship between volatility selling and leverage and how these together make market dislocations inevitable; the consequence that the economic cycle is now a function of bubbles and busts in risk assets in the context of an overall tendency to deflation; and the manner in which these factors have combined with the centrality of US markets, particularly the S&P 500, to the global market structure, transforming the S&P 500 itself into a carry trade." - The Rise Of Carry

Carry trades make money when nothing happens. This is akin to selling options and collecting premiums as income. It works till it doesn't. You must have a large balance sheet (and strong tolerance for risk).



Wait. I Thought You Said Time + Volatility Were My Edge?

MORE ON CHANGING MARKET STRUCTURE

Yes, and no.

To explain, we return to the implications of call and put option exposure imbalances and their impact on market participants.

Gamma* is the sensitivity of an option to changes in underlying price. Dealers that take the other side of option trades hedge their exposure to risk by buying and selling the underlying asset. When dealers are short-gamma, they hedge by buying into strength and selling into weakness. When dealers are long-gamma, they hedge by selling into strength and buying into weakness. The former exacerbates volatility. The latter calms volatility.

*A SECOND-ORDER DERIVATIVE OF DELTA, OR THE DIRECTIONAL EXPOSURE OF AN OPTION.

So What About Gamma?

MORE ON CHANGING MARKET STRUCTURE

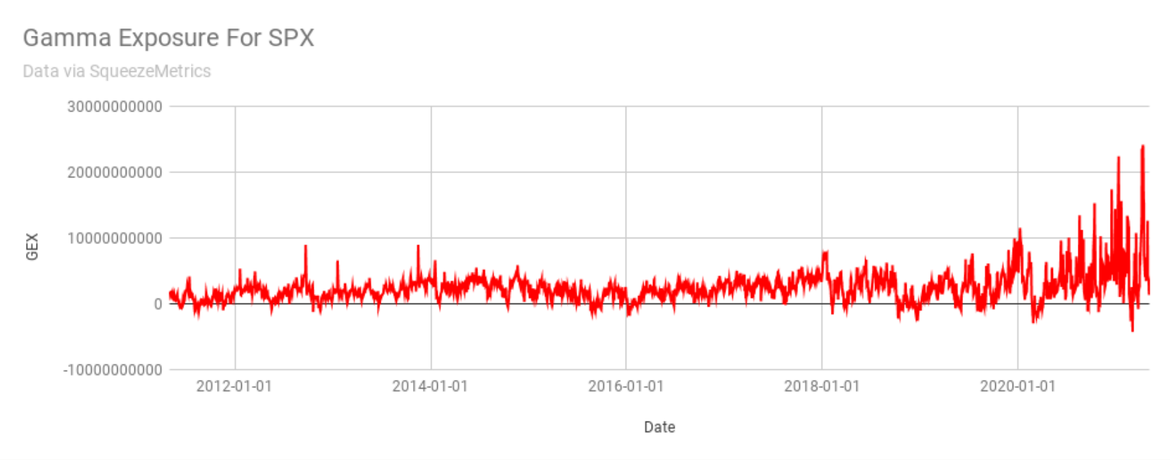
Adding, most funds are committed to holding long positions. In the interest of lower volatility returns, these funds will collar off their positions, selling calls to finance the purchase of downside put protection.

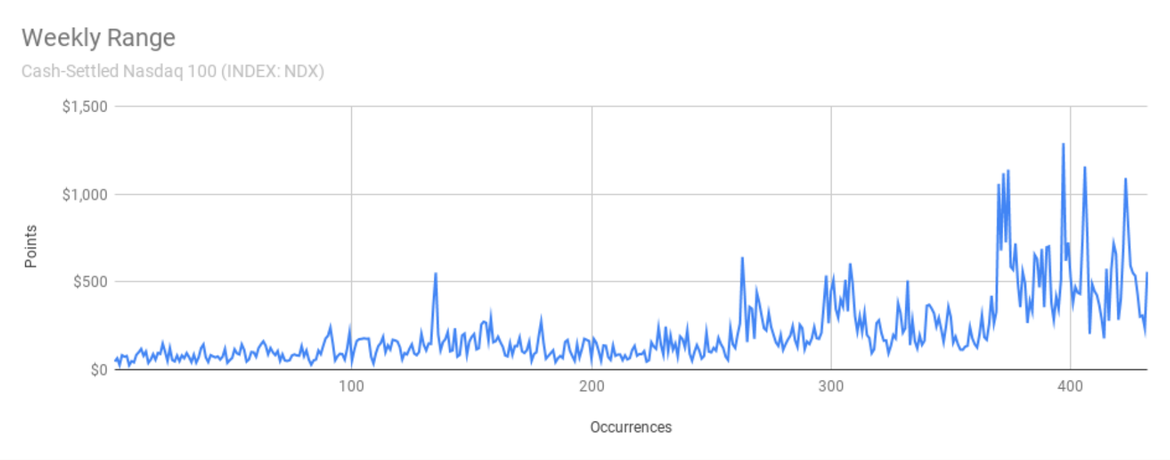
As a result of this activity, options dealers are long upside and short downside protection.

This exposure must be hedged; dealers will sell into strength as their call (put) positions gain (lose) value and buy into weakness as their call (put) positions lose (gain) value.

Now, unlike theory suggests, dealers will hedge call losses (gains) quicker (slower). This leads to "long-gamma," a dynamic that crushes volatility and promotes momentum, observed by lengthy sprints — like the one the market is currently in — followed by rapid de-risking events as the market transitions into "short-gamma."

Gamma + Price Changes





Graphics by Physik Invest. Data (left) from SqueezeMetrics. Data (right) from TradingView.

Markets Are Random And Volatile

EITHER UP OR DOWN AND MOSTLY CHOPPY

History suggests markets trend up but day-to-day returns are relatively normal (random) volatile.

Multi-Leg Option Strategies

MINIMIZE RISK, INCREASE REWARD

Layer long and short positions, on top of each other, to create a structure with an asymmetric reward-to-risk profile.

Acting Amid Givens

NOW THAT YOU KNOW, HERE'S WHAT YOU CAN DO!

Express your opinion efficiently using multi-leg options strategies that leverage the unique dynamics of time and volatility to your advantage.

Types Of Strategies

CREDIT SPREAD (HIGH PROBABILITY OF PROFIT)

Sell one option closer-to-the-money. Buy one option farther-from-the-money.

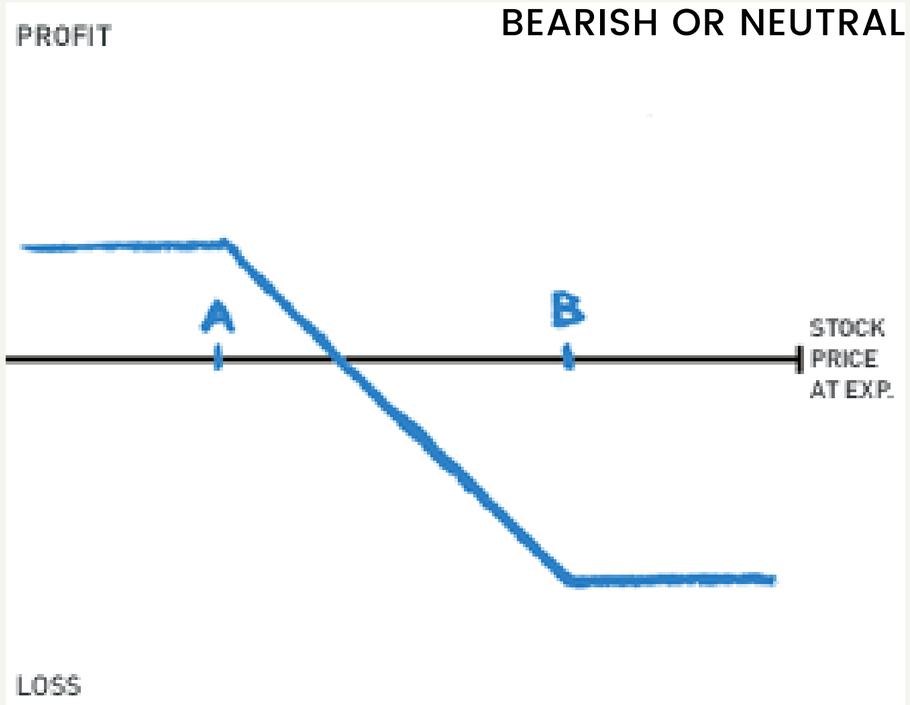
DEBIT SPREAD (MEDIUM PROBABILITY OF PROFIT)

Buy one option closer-to-the-money. Sell one option farther-from-the-money.

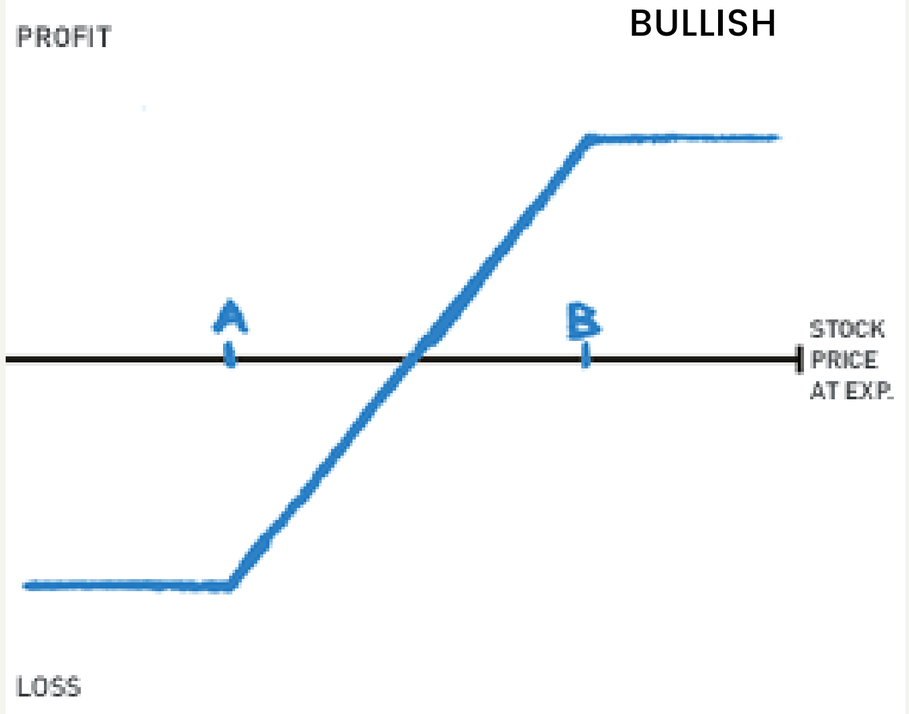
RATIO SPREAD (LOWER PROBABILITY OF PROFIT)

Buy one option closer-to-the-money. Sell two or more options farther-from-the-money. To define risk, buy options even farther out.

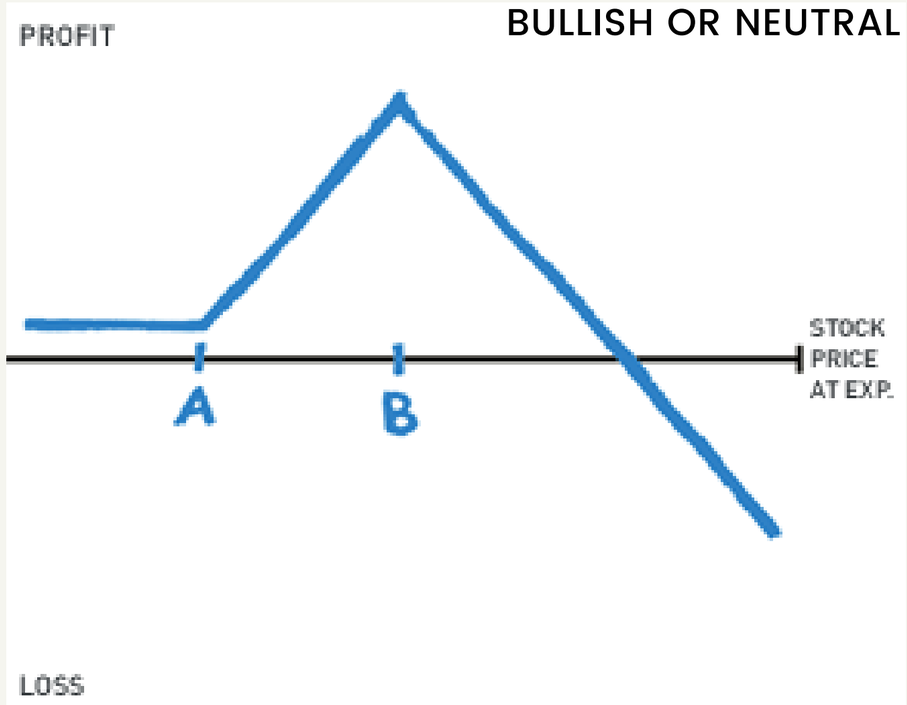
CALL
CREDIT SPREAD

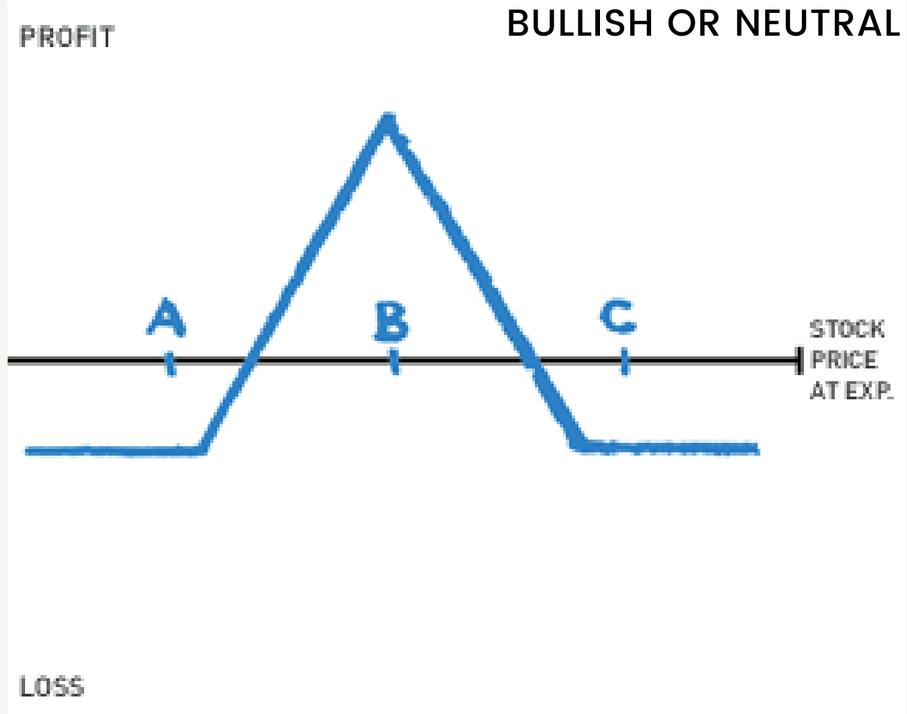


CALL
DEBIT SPREAD



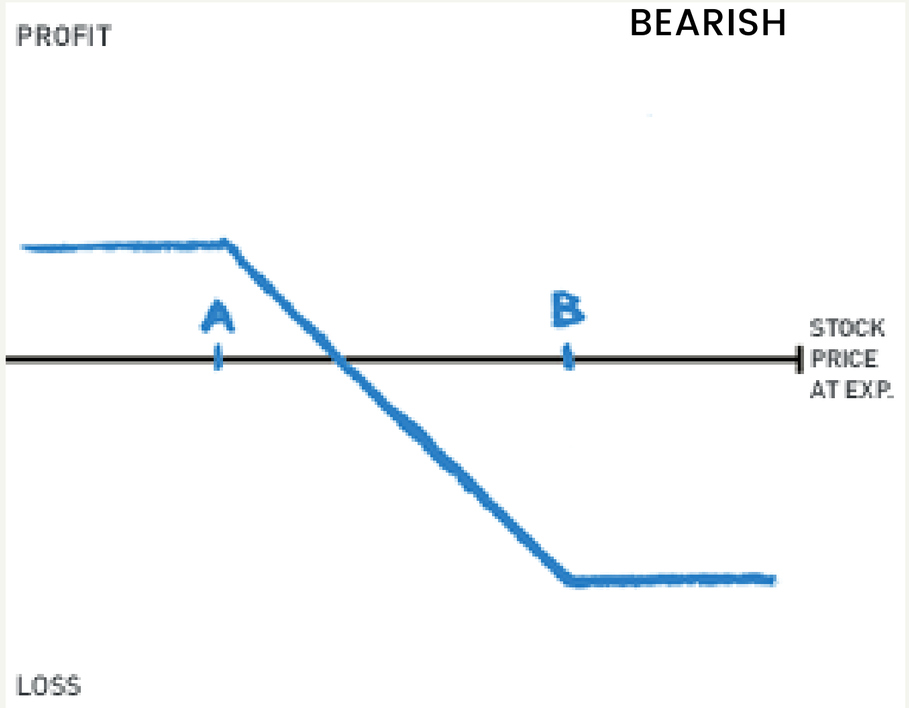
CALL
RATIO SPREAD





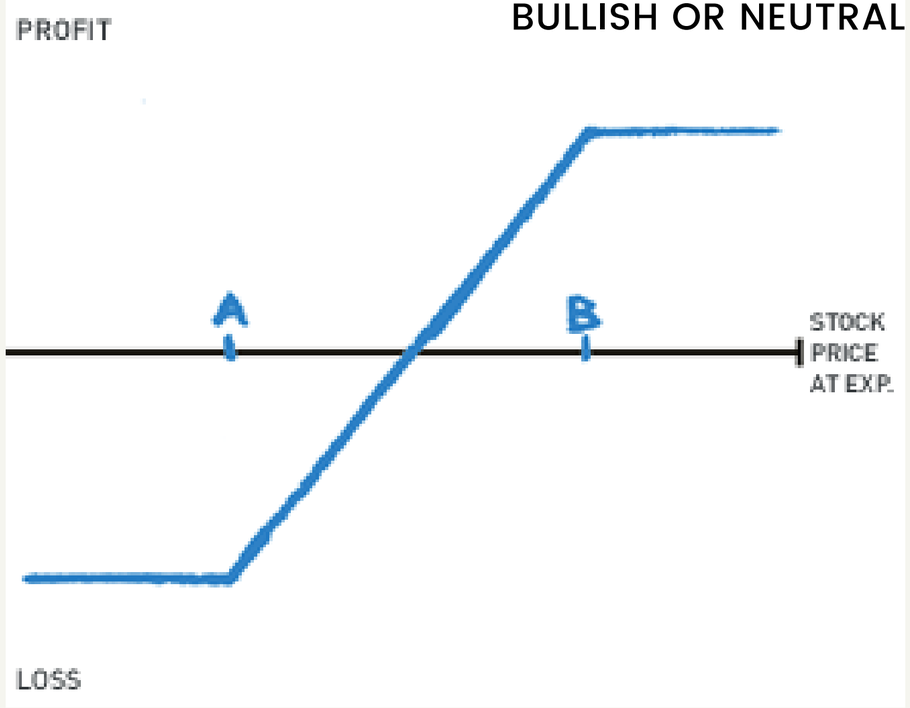
PUT
DEBIT SPREAD

BEARISH



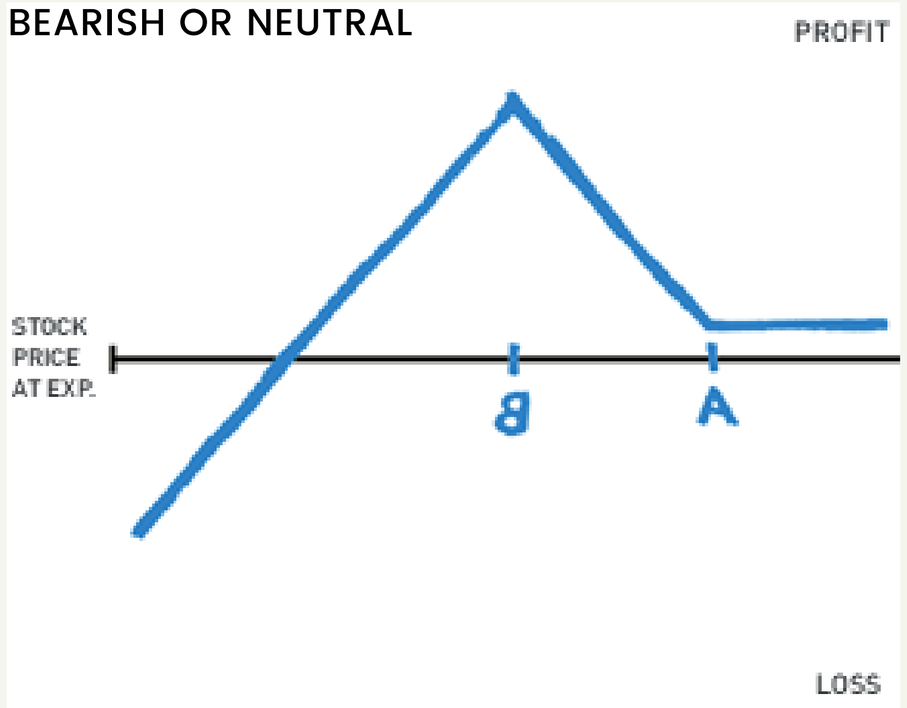
PUT
CREDIT SPREAD

BULLISH OR NEUTRAL

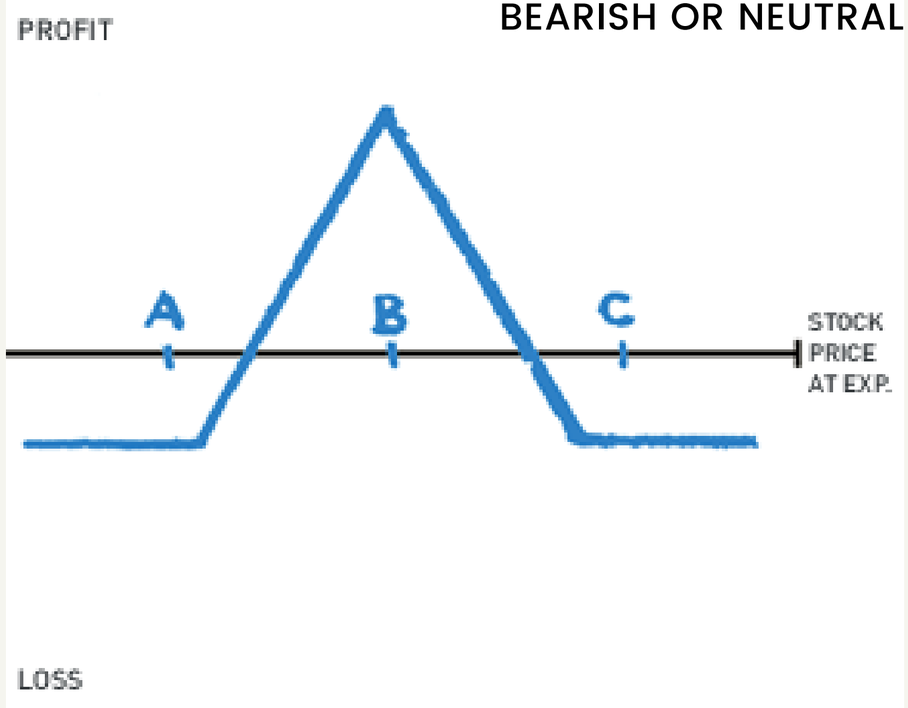


PUT
RATIO SPREAD

BEARISH OR NEUTRAL



BEARISH OR NEUTRAL



Entry Checklist

SETUP

What are your grounds for entry? Technical or fundamental.

TARGET

Where do you think the asset has the potential to move?

TIMEFRAME

How long do you think it will take for the asset to move?

RISK

What are you comfortable risking? 1-2% is the standard.

STRATEGY

If bullish, sell at-the-money put credit spread or buy call debit (ratio) spread structured around target price.

If bearish, sell at-the-money call credit spread or buy put debit (ratio) spread structured around target price.

If credit spread, capture 50-75% premium collected.
If debit spread, capture 2-300% premium paid.

Case Study: Trading Tesla's S&P 500 Inclusion

What Happened: On November 17, 2020, shares of Tesla Inc (NASDAQ: TSLA) surged on news that S&P Dow Jones Indices would include the stock in the S&P 500, the most liquid index in the world.

Since markets are most influenced by credit and positioning, news of the inclusion was impactful. Funds tied to the S&P 500 would purchase Tesla shares from a dealer by the addition date. This means that dealers would look to purchase shares of the stock heading into the event, to later supply funds at the close of Friday, December 18, the last session before the inclusion.

In the simplest of terms, the event was a positive since it meant that (1) speculative derivatives activity and associated hedging, (2) short-term traders, as well as (3) dealers and index funds would now support the stock.

The following sequence analysis unpacks how Physik Invest traded equity and derivatives tied to the carmaker's stock leading up to the December 21, 2020 index inclusion.

Note: Please visit www.physikinvest.com for more on this example and actual trade orders.

Entry Checklist

SETUP

Breakout from consolidation.

TARGET

$500-$675.

TIMEFRAME

1-2 Months.

RISK

Up to 5% in credit and debit trades. Up to 50% (margin) for ratios.

STRATEGY

Bullish, sell at-the-money put credit spread and buy call debit (ratio) spread structured around target price(s).

If credit spread, capture 50-75% premium collected.
If debit spread, capture 2-300% premium paid.

Over 8 sequences, the trade yielded nearly an 8% return on the entire account. The following is sequence one.

Sequence 1: On news of the inclusion, market participants initiated shares of Tesla out of balance, beyond trend resistance. Thereafter, in accordance with a typical give and go scenario, the stock faded, filling 50% of the low-volume area left after the initial move higher, before aggressive buying resurfaced to continue the new trend.

Through November 19, the following positions were added for a $61.00 debit, in total. At this point if all legs were to remain out of the money (i.e., expire worthless) by November 20, the maximum loss would be $61.00, approximately 1/10 of a standard risk unit, or the capital risked in a typical position.

- 500+1/530-2 call ratio spread
- 490+2/505-3 call ratio spread
- 525+1/550-2 call ratio spread
- 510+1/525-2 call ratio spread
- 445-1 put (short leg to finance long legs)
- 460-1 put (short leg to finance long legs)

By November 20, all aforementioned positions were closed for an $827.00 credit, a 1,255.74% return on initial investment (i.e., the $61.00 debit).

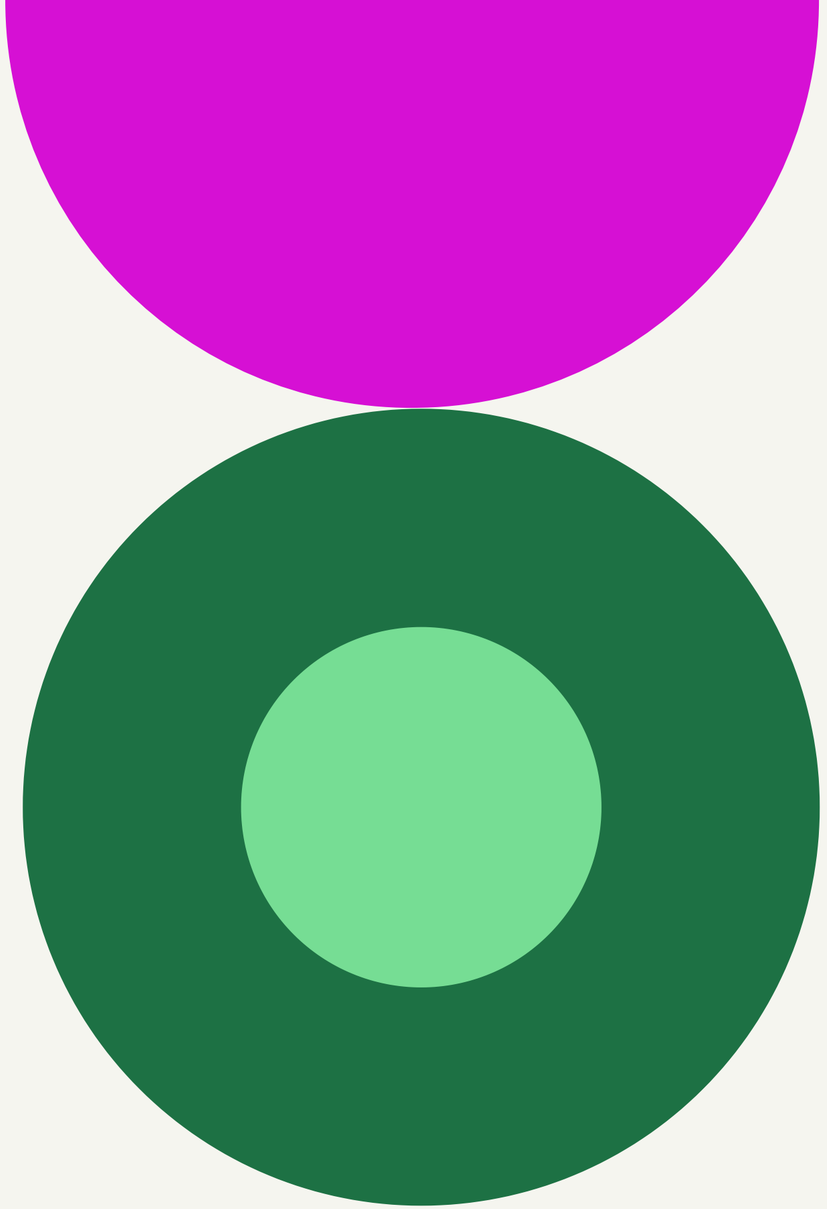
All the above call-side structures were initiated against the $500 high open interest strike. Reason being, option expiries mark an end to pinning (i.e, the theory that market makers and institutions short options move stocks to the point where the greatest dollar value of contracts will expire worthless) and the reduction dealer gamma exposure. Please see https://bit.ly/33owfjE to see Benzinga's option flow during this period.

Summary

STRATEGY IS A KEY PILLAR IN SUCCESSFUL TRADING.

In this presentation, you learned what moves the market as well as how you can efficiently act on your opinion using complex products.

With an understanding of how the market works as well as strategies available, you may be able to derive a fair return.



Tools You Need

CHARTING

Learn the basics of technical analysis (i.e., Fibonacci principles, chart patterns, volume-weighted average price analysis, moving averages, trendlines, candlesticks.

STRATEGY AND RISK MANAGEMENT

Learn how options are priced, the different strategies that exist, as well as how to manage risk.

OPTION FLOW AND MARKET LIQUIDITY

Understand "market color," or how large market participants are positioning themselves.

Please email renato@physikinvest.com to receive this presentation and a sample trading plan.