TradeStation®

The Art of Options Conversion: Trading Options Market Inefficiencies

Options
Strategies

20250129-4193177-132393381323933
20250306-4298585-13571538

Conversion arbitrage is an options trading strategy used to potentially benefit on perceived inefficiencies in the pricing of certain options. Conversion arbitrage is considered a risk-neutral strategy.

What is an options conversion strategy?

A conversion strategy consists of three simultaneous positions:

- Long stock position
- Long put option
- Short call option

The put and call options must have the same strike price and expiration date. This combination creates a position that, when properly structured, can potentially profit from temporary price discrepancies in the options market while maintaining relatively limited risk.

Alternatively, a reverse conversion strategy can be created to potentially benefit from similar price discrepancies. It also requires three simultaneous positions:

- Short stock position
- Short put option
- Long call option

20250129-4193177-132393381323933
20250306-4298585-13571538

The strategy's foundation: put-call parity

At the heart of conversion strategies is put-call parity, which states that there should be a fixed relationship between put options, call options, and the underlying stock. This relationship can be expressed as:

Stock price + put price = call price + present value of strike price

When this relationship becomes temporarily unbalanced, traders can potentially profit from the discrepancy via a conversion strategy. These imbalances often occur during periods of market stress, corporate actions, or significant changes in interest rates or dividend expectations.

Calculating present value

Most traders use financial calculators or software to perform these calculations, especially when dealing with multiple positions or when time is critical. However, understanding the underlying math helps you better appreciate why certain pricing relationships should hold and how to identify genuine opportunities when they don't.

The basic concept is that money in the future is worth less than the same amount today due to the potential to earn interest. When we "discount" a future value back to today, we calculate its present value. Let's break this down step by step.

The formula for present value is:

PV = FV / (1 + r)^t

Where:

- **PV** is the present value (what we're solving for)
- **FV** is the future value (the strike price)
- **r** is the annual risk-free interest rate (as a decimal)
- **t** is the time until expiration (in years)

Let's work through an example:

Say we have a strike price of $100 (our future value), and we want to find its present value using a 5% risk-free rate (0.05) for an option that expires in 3 months (0.25 years).

Plugging these numbers into our formula:

PV = $100 / (1 + 0.05)^0.25

Let's solve this step by step:

1. First, add 1 to the interest rate: 1 + 0.05 = 1.05
2. Raise this to the power of 0.25: 1.05^0.25 ≈ 1.0123
3. Divide $100 by this result: $100 / 1.0123 ≈ $98.77

So, the present value of receiving $100 in three months, given a 5% risk-free rate, is $98.77.

This calculation becomes particularly important in conversion strategies because it helps us try to identify whether options are properly priced according to put-call parity. Remember our earlier equation:

Stock price + put price = call price + present value of strike price

If we see prices that don't align with this relationship (after accounting for the time value of money), it might indicate a trading opportunity.

***Watch the Webinar** – "Vertical Options Spreads: A Guide to Credit and Debit Strategies". Learn how to limit risk with multi-leg options strategies.*

20250129-4193177-132393381323933
20250306-4298585-13571538

For instance, if you see:

- Stock trading at $100
- 3-month 100-strike call at $5.50
- 3-month 100-strike put at $4.00
- Risk-free rate at 5%

You can check if these prices align with put-call parity:

$100 + $4.00 = $5.50 + $98.77

Left side: $104.00 **Right side: $104.27**

The small difference ($0.27) represents a potential arbitrage opportunity.

Identifying opportunities

Successful conversion trading requires careful attention to several factors:

1 Market conditions

Potential opportunities often arise during periods of increased volatility when market makers may be less aggressive in maintaining tight spreads. During these times, the options market may temporarily become less efficient, creating the possibility for price discrepancies.

High volatility environment scenario

During periods of market stress, bid-ask spreads often widen, creating opportunities for options conversions. Consider a volatile stock during a market correction:

Normal conditions:

- Stock: $50.00
- 2-month 50-strike call: $2.50
- 2-month 50-strike put: $2.50
- Bid-ask spreads: $0.05

20250129-4193177-132393381323933
20250306-4298585-13571538

During volatility spike:

- Stock: $50.00 (but trading in wide range)
- 2-month 50-strike call: $3.50 (bid: $3.25, ask: $3.75)
- 2-month 50-strike put: $3.50 (bid: $3.25, ask: $3.75)
- Bid-ask spreads: $0.50

The wider spreads and increased uncertainty can lead to temporary imbalances of put-call parity, especially when market makers reduce their risk exposure.

Index option versus component stock inefficiencies

Sometimes, inefficiencies arise between index options and the underlying component stocks. For instance, during index rebalancing periods:

S&P 500 scenario:

- Index level: 4000
- Major component stock being removed
- Index options adjust quickly
- Component stock options adjust more slowly

This creates temporary imbalances between the fair values of index options and the aggregate values of component options, leading to conversion opportunities at index and individual stock levels.

2 Corporate actions

Dividend announcements, merger proposals, and other corporate events can create temporary mispricing between options and the underlying stock. These situations may also provide opportunities for conversion strategies, particularly when the market takes time to adjust to new information fully.

Dividend announcement scenario

Consider a stock trading at $75 with a surprise dividend announcement. The market might take time to fully adjust option prices to reflect this new information. For example, if a $1 special dividend is announced, we might temporarily see:

20250129-4193177-132393381323933
20250306-4298585-13571538

Before announcement:

- Stock price: $75
- 3-month 75-strike call: $3.50
- 3-month 75-strike put: $3.00

Immediately after announcement:

- Stock price: quickly drops to $74
- Call price: still at $3.50 (slow to adjust)
- Put price: quickly moves to $4.00

This temporary lag in the call option's price adjustment creates an inefficiency traders may make use of through a conversion options strategy. The position would cost $74.50 ($74 + $4.00 - $3.50) but would ultimately be worth $75, creating a potential profit opportunity.

Merger arbitrage situation

When companies announce mergers, it can create complex pricing dynamics. Let's say Company A announces it will acquire Company B for $100 per share, but Company B currently trades at $95 due to deal uncertainty. This might create the following scenario:

- Stock price: $95
- 6-month 90-strike call: $8.00
- 6-month 90-strike put: $2.50

The options market might not fully reflect the probability of deal completion, especially if the deal terms change. If you believe the deal has a high chance of closing, the conversion strategy could provide a way to capture the spread while maintaining protection against deal failure.

3 Interest rate sensitivity

Changes in interest rates can affect the theoretical relationship between puts and calls. Quick changes in rates may lead to temporary mispricing as different market participants adjust their positions at different speeds.

20250129-4193177-132393381323933
20250306-4298585-13571538

Interest rate impact scenario

Let's examine a scenario with a sudden 0.50% rate hike:

Before rate change:

- Stock: $100
- 1-year 100-strike call: $8.00
- 1-year 100-strike put: $7.00
- Risk-free rate: 4%

After rate announcement:

- Stock: $100
- Call price: quickly moves to $8.50
- Put price: still at $7.00 (temporary lag in adjustment)
- New risk-free rate: 4.50%

The lag in put option pricing adjustment creates a brief window for conversion strategies to potentially profit from the inconsistency.

Trade implementation

Proper execution of conversion strategies requires attention to several key elements:

1 Timing

All three components of the position should be executed simultaneously to avoid exposure to market movements that could eliminate the potential profit opportunity.

2 Order types

Use limit orders rather than market orders to ensure you receive the best price possible.

3 Position sizing

When determining position size, consider margin requirements and the overall risk profile. Remember that while the strategy is relatively low risk, it still requires careful capital management and understanding.

20250129-4193177-132393381323933
20250306-4298585-13571538

Managing the position

Once established, conversion positions require ongoing monitoring and management:

1 Dividend risk

If you're short the call option, be aware of potential early exercise risk around dividend dates. The risk is particularly high when the dividend amount exceeds the remaining time value in the call option.

2 Interest rate changes

Monitor significant changes in interest rates, as these can affect the profitability of existing positions. Consider adjusting positions if rate changes materially affect your expected return.

3 Market volatility

Increased volatility can create both opportunities and risks. Monitor how changes in implied volatility affect your position and be prepared to adjust as needed.

Exit strategies

Several approaches exist for exiting conversion positions:

1 Hold to expiration

If the price discrepancy that prompted the trade persists, you may choose to hold the position until the option expires. The position will be worth the strike price at expiration, regardless of where the stock is trading.

2 Early unwinding

If the price discrepancy corrects before expiration, consider unwinding the entire position to capture any profits. This approach can free up capital for other opportunities and reduce exposure to further potential risks.

3 Partial exits

In some cases, you may find opportunities to leg out of the position by closing individual components when favorable prices present themselves. However, this approach requires careful management of margin requirements and the remaining market exposure.

20250129-4193177-132393381323933
20250306-4298585-13571538

Risk Management

While conversion strategies are considered relatively low risk, several key risks require attention:

1. **Execution risk**

   Poor execution across the three legs can eliminate potential profits. Use appropriate order types and consider the impact of transaction costs.

2. **Early exercise risk**

   Monitor positions closely around dividend dates and be prepared to adjust if early exercise becomes likely.

3. **Interest rate risk**

   Changes in interest rates can affect position profitability. Consider using shorter-dated options to reduce interest rate sensitivity.

4. **Transaction costs**

   Commission costs and bid-ask spreads can significantly impact profitability. Ensure your analysis includes all relevant costs before entering positions.

Explore Strategies *– Discover options strategies and empower your trading with the knowledge and skills to navigate dynamic market conditions.*

20250129-4193177-132393381323933
20250306-4298585-13571538

Conclusion

Options conversion strategies may offer sophisticated traders a method to profit from market inefficiencies while maintaining relatively controlled risk. Success requires careful attention to execution, ongoing position management, and a thorough understanding of the factors that can affect profitability. While these strategies may not be suitable for all traders, they represent a valuable tool for those seeking to potentially capitalize on temporary market mispricing.

Remember that successful implementation requires:

- Sophisticated monitoring systems like RadarScreen®
- Quick execution capabilities like the ones in OptionStation® Pro
- Strong risk management practices
- Thorough understanding of options mechanics
- Careful consideration of all costs and risks

Before trading conversion strategies, you should practice using TradeStation's Simulated Trading Mode. This powerful feature allows you to execute conversion strategies in real-time market conditions without risking actual capital. You can practice simultaneously entering all three legs of the trade, monitor how price changes affect your position, and experiment with different exit strategies.

When you feel more comfortable with options conversion trades in simulation and understand how to manage various market scenarios, you'll be better prepared to implement these strategies with real capital.

With proper education, preparation, and execution, conversion strategies can be valuable additions to a trader's strategic toolkit, particularly in markets characterized by temporary inefficiencies or heightened volatility.

20250129-4193177-132393381323933
20250306-4298585-13571538

Important Information and Disclosures

Options trading is not suitable for all investors. Your TradeStation Securities' account application to trade options will be considered and approved or disapproved based on all relevant factors, including your trading experience. See **www.TradeStation.com/DisclosureOptions**. Visit **www.TradeStation.com/Pricing** for full details on the costs and fees associated with options.

Margin trading involves risks, and it is important that you fully understand those risks before trading on margin. The Margin Disclosure Statement outlines many of those risks, including that you can lose more funds than you deposit in your margin account; your brokerage firm can force the sale of securities in your account; your brokerage firm can sell your securities without contacting you; and you are not entitled to an extension of time on a margin call. Review the Margin Disclosure Statement at **www.TradeStation.com/DisclosureMargin**.

Any examples or illustrations provided are hypothetical in nature and do not reflect results actually achieved and do not account for fees, expenses, or other important considerations. These types of examples are provided to illustrate mathematical principles and not meant to predict or project the performance of a specific investment or investment strategy. Accordingly, this information should not be relied upon when making an investment decision.

This content is for educational and informational purposes only. Any symbols, financial instruments, or trading strategies discussed are for demonstration purposes only and are not research or recommendations. TradeStation companies do not provide legal, tax, or investment advice.

Past performance, whether actual or indicated by historical tests of strategies, is no guarantee of future performance or success. There is a possibility that you may sustain a loss equal to or greater than your entire investment regardless of which asset class you trade (equities, options or futures); therefore, you should not invest or risk money that you cannot afford to lose. Before trading any asset class, first read the relevant risk disclosure statements on **www.TradeStation.com/Important-Information**.

Securities and futures trading is offered to self-directed customers by TradeStation Securities, Inc., a broker-dealer registered with the Securities and Exchange Commission and a futures commission merchant licensed with the Commodity Futures Trading Commission. TradeStation Securities is a member of the Financial Industry Regulatory Authority, the National Futures Association, and a number of exchanges.

TradeStation Securities, Inc. and TradeStation Technologies, Inc. are each wholly-owned subsidiaries of TradeStation Group, Inc., both operating, and providing products and services, under the TradeStation brand and trademark. When applying for, or purchasing, accounts, subscriptions, products, and services, it is important that you know which company you will be dealing with. Visit **www.TradeStation.com/DisclosureTSCompanies** for further important information explaining what this means.

20250129-4193177-132393381323933
20250306-4298585-13571538