



Trading Focus - Laevitas Partnership

Crypto Derivatives Series II: Options

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Summary

- In Part II of this Crypto Derivatives Series with Laevitas, we explore the world of options. These instruments offer investors flexibility in hedging and speculation unachievable in other financial derivatives via their complexity.
- Despite their popularity in traditional markets, options have faced some adoption headwinds in crypto, particularly in DeFi, especially when compared to perpetual futures. In this tough environment, a few players stand out, notably Deribit which as an exchange has dominated options volumes in crypto, as well as Paradigm, which has become a go-to platform for institutional derivatives trading.
- Finally, we are lucky to share insights from the most prominent names in the crypto options scene:
 - Luuk Strijers: CEO of Deribit
 - Anand Gomes: CEO of Paradigm and Paradex
 - Joshua Lim: Co-Founder of Arbelos Markets
 - Jun-Young Heo: Derivatives trader at Presto Labs

Crypto Derivatives Series II: Options.

RESEARCH PARTNERSHIP

Presto Research ×  LAEVITAS

Overview

What are Options?

Much like futures that [we explored in Part I of this series](#), options are a type of financial derivative. They give the holder the right, but not the obligation, to buy (for a *call* option) or sell (for a *put* option) an underlying asset at a predetermined price (the strike price) within a specific time frame (by the expiration date). These versatile instruments play a crucial role in risk management, speculation, and portfolio optimisation across various asset classes.

Key characteristics of options include:

- **Underlying Asset:** The security or commodity on which the option is based (e.g., stocks, indices, commodities, or bitcoin).
- **Strike Price:** The price at which the option can be exercised (versus the “current price”, where the underlying asset is trading now).
- **Expiration Date:** The last date on which the option can be exercised.
- **Premium:** The upfront cost paid by the buyer to the seller for the option contract.
- **American vs. European:** American options can be exercised any time before expiration, while European options can only be exercised at expiration.

Simple Example: Long Bitcoin Call Option

Here's an example of a call option using the above definitions - let's consider a call option for bitcoin:

- **Underlying Asset:** 1 Bitcoin (BTC)
- **Current Bitcoin Price:** \$70,000
- **Strike Price:** \$100,000
- **Expiration Date:** December 31, 2023 (4 months from now)
- **Premium:** \$2,000
- **Option Type:** European

In this scenario:

- An investor believes Bitcoin's price will rise above \$100,000 within the next 4 months.
- They purchase a call option with the above terms, paying a premium of \$2,000 upfront.
- This gives them the right (but not the obligation) to buy 1 Bitcoin (the underlying asset) at the strike price of \$100,000, on the expiration date (since it's a European option).
- If Bitcoin's price rises to \$150,000 by the expiration date, the investor could:
 - a) Exercise the option, buying 1 Bitcoin at \$100,000 (instead of the current market price of \$150,000, locking in an instant profit of \$50,000).
 - b) Sell the option contract itself, which would now be worth more than the original \$2,000 premium (see more on “Intrinsic Value” below).
- If Bitcoin's price stays below \$100,000, the investor might let the option expire worthless, losing only the initial \$2,000 premium.

Important concepts in options trading:

- Intrinsic Value: The amount by which an option is ITM, or zero for OTM options.
- Time Value: The portion of the option's premium that exceeds its intrinsic value, reflecting the potential for the option to gain value before expiration.
- Moneyness: Describes the option's intrinsic value in relation to the underlying asset's current market price.
- In-the-Money (ITM): An option with intrinsic value. For calls, when the strike price is below the market price; for puts, when the strike price is above the market price.
- At-the-Money (ATM): When the strike price is equal or very close to the current market price of the underlying asset.
- Out-of-the-Money (OTM): An option with no intrinsic value. For calls, when the strike price is above the market price; for puts, when the strike price is below the market price.
- The Greeks: Named after Greek letters, these are a set of risk measures used to quantify an option's sensitivity to various factors and are crucial for understanding and managing the risks associated with options positions. We will explore the Greeks later on.

Options offer several advantages to investors and traders:

- Leverage: Options provide exposure to larger positions with smaller capital outlays.
- Risk Management: They can be used to hedge existing positions against adverse price movements.
- Income Generation: Writing options can create additional income streams for portfolio holders.
- Flexibility: Options allow for the creation of complex strategies to profit from various market conditions.

However, options also carry risks, including:

- Time Decay: Options lose value as they approach expiration (one of the "Greeks" known as theta).
- Volatility Risk: Changes in implied volatility can significantly impact option prices.
- Limited Lifespan & Loss of Principal: Unlike stocks, options have a finite life and can expire worthless.

Options Pay-Off

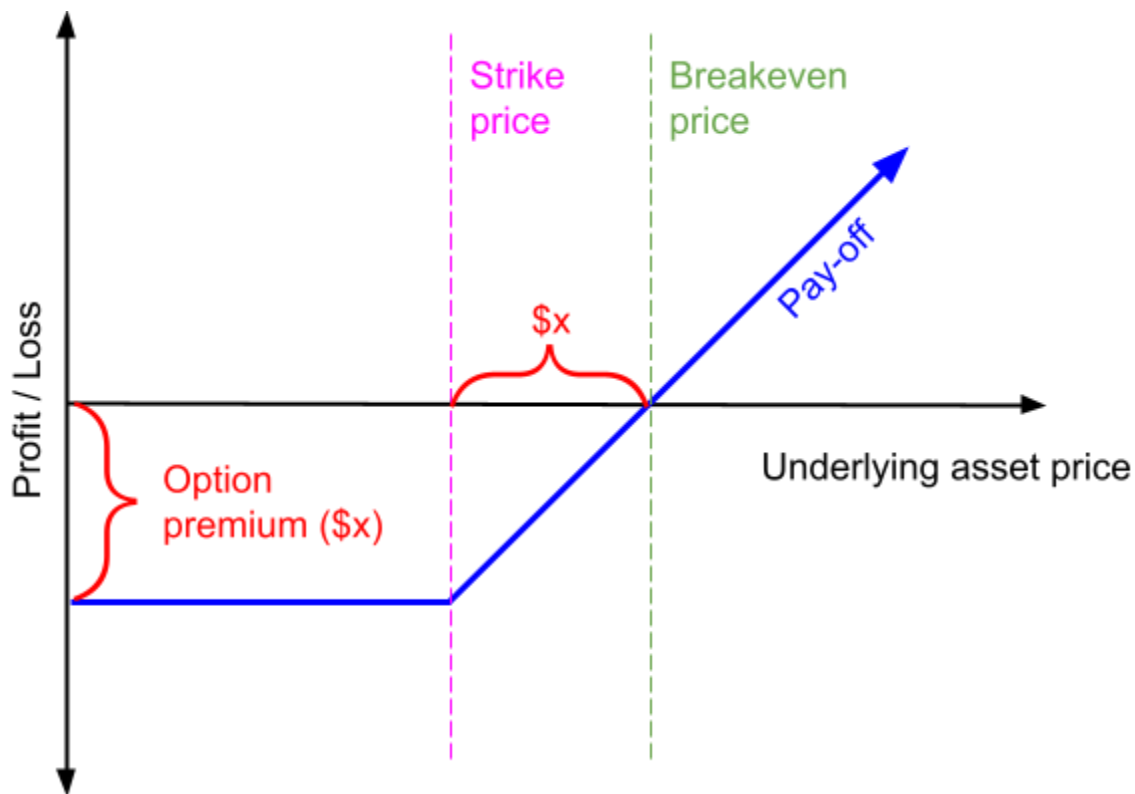
The pay-off in options is the financial outcome of the contract at expiration or upon exercise. It represents the profit or loss for the option holder based on the difference between the underlying asset's price and the option's strike price.

Key points about pay-off:

- For call options, the pay-off is positive if the underlying asset's price is above the strike price.
- For put options, the pay-off is positive if the underlying asset's price is below the strike price.
- The maximum loss for option buyers is limited to the premium paid.
- Option sellers have limited profit potential (the premium received) but potentially significant downside risk.

In Figure 1 we go through a classic pay-off diagram, which visually represents the profit and loss at different underlying prices, for a long call position.

Figure 1 : A pay-off diagram for a long call position.



Source: Presto Research

You can observe that the premium price is the difference between the breakeven and strike price. For example, let's say an asset is trading at \$80, and you buy a \$100 strike call for \$5. Then your immediate PnL is -\$5 since the option is OTM, and your breakeven price is \$105 because you need to make up the amount you spent on the option premium.

The Greeks

Let's explore the Greeks using Laevitas' options calculator (Figure 2):

Figure 2 : Options calculator inputs.

Entry

Ticker

Underlying

Strategy

VANILLA CALL

Expiry

Leg 1

Strike / Delta

Impl. Volatility

Size

(Optional)

USD Int. Rate

BTC Yield

Here we are selecting BTC-27DEC24-100000-C:

- Underlying asset: BTC
- Expiration date: 27 December 2024
- Strike price: \$100,000
- Option type: Call

Source: Laevitas

The results can be seen in Figure 3.

Figure 3 : Options calculator output.

Options	Price (\$)	Amount	Delta	Gamma	Vega	Theta	Rho	Vanna	Volga	Tilt	Smile	ATM IV
27DEC24												
BTC-27DEC24-100000-C	-2179.29 ND	1	0.175	0.0000093	121.04	-17.58	41.33	0.53	20983.7	2236.03	5507.89	60.9
Strategy Result												
	-2179.29 ND	-	0.175	0.0000093	121.04	-17.58	41.33	0.53	20983.7	2236.03	5507.89	
Strategy Statistics												
Break-even Expiry										\$102179.29 (46.46%)		
Max Loss										2179.29		
Max Profit										Unlimited		
Profit Probability (%)										8.804		

Below we go through the components of an options contract, in particular the main Greeks which are highlighted in red, using this example of BTC-27DEC24-100000-C.

Figure 4: Key components of options.

Component	Definition	From our example:
<u>Price (\$)</u>	This is the Premium we discussed earlier. Since this is a long position, the max loss is equal to the premium (as Figure 3 shows).	<u>\$2,179.29</u> “ND” means “Net Debit”, meaning you pay to buy this option, versus “NC” or “Net Credit” where you sell the premium.
<u>ATM IV</u>	Implied volatility is a measure of the market's expectation of future volatility for the underlying asset over the life of the option expressed as an annualised percentage. It's "implied" because it's derived from the option's market price, rather than being directly observed. ATM IV means that you've backed out the IV setting the strike to be (or very close to) the current underlying.	<u>60.9</u> The market expects Bitcoin's price to fluctuate within a $\pm 60.9\%$ range over the next year.
<u>Delta</u>	One of the Greeks. Measures the rate of change in the option's price with respect to the change in the underlying asset's price. Ranges between -1~0 for puts and 0~1 for calls.	<u>0.175</u> For every \$1 move in BTC, this option price will move in the same direction by approximately \$0.175. The option behaves like owning 0.175 BTC. Implies a 17.5% chance that the option will expire in-the-money i.e. market is predicting a 17.5% chance that BTC will be at \$100,00 or more on 27th Dec 2024.
<u>Gamma</u>	One of the Greeks. Measures the rate of change in delta with respect to the change in the underlying asset's price. Second-order derivative of the option price. Higher for ATM options and decreases for ITM or OTM options.	<u>0.0000093</u> For every \$1 move in BTC, the delta will move by 0.0000093 in the same direction. So if BTC goes up by \$1, the new delta will be 0.1750093.
<u>Vega</u>	One of the Greeks. Measures the rate of change in the option's price with respect to changes in implied volatility. Expressed as the amount of money per share the option's value will gain or lose as volatility rises or falls by 1% Generally positive for long options and negative for short options, and higher for longer-date options.	<u>121.04</u> For every 1 percentage point move in IV, the option's price will move in the same direction by \$121.04. So if the IV goes from 60.9 to 61.9, the option's price will go from \$2,179.29 to \$2,300.33.
<u>Theta</u>	One of the Greeks. Measures the rate of change in the option's price with respect to time decay i.e. represents how much value an option loses each day as it approaches expiration. Usually negative for bought options, positive for sold options and higher for ATM options and increases as expiration approaches.	<u>-17.58</u> The option loses \$17.58 in value each day due to time decay.

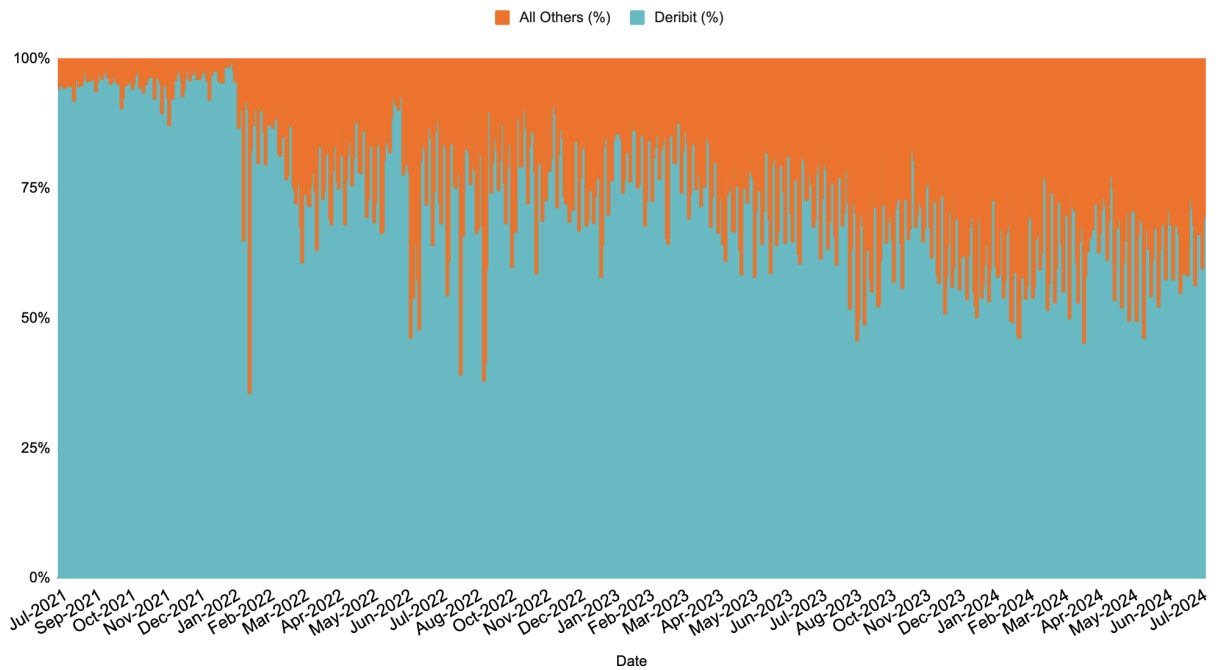
Source: Presto Research

Current Landscape

Venues and Volumes

Much like everything else in this market, crypto options have an interesting history, starting with P2P options writing on forums like IRC channels. As the market matured, several centralised exchanges started offering options, notably Deribit which launched in June 2016 and remains as the dominant options exchange today (Figure 5).

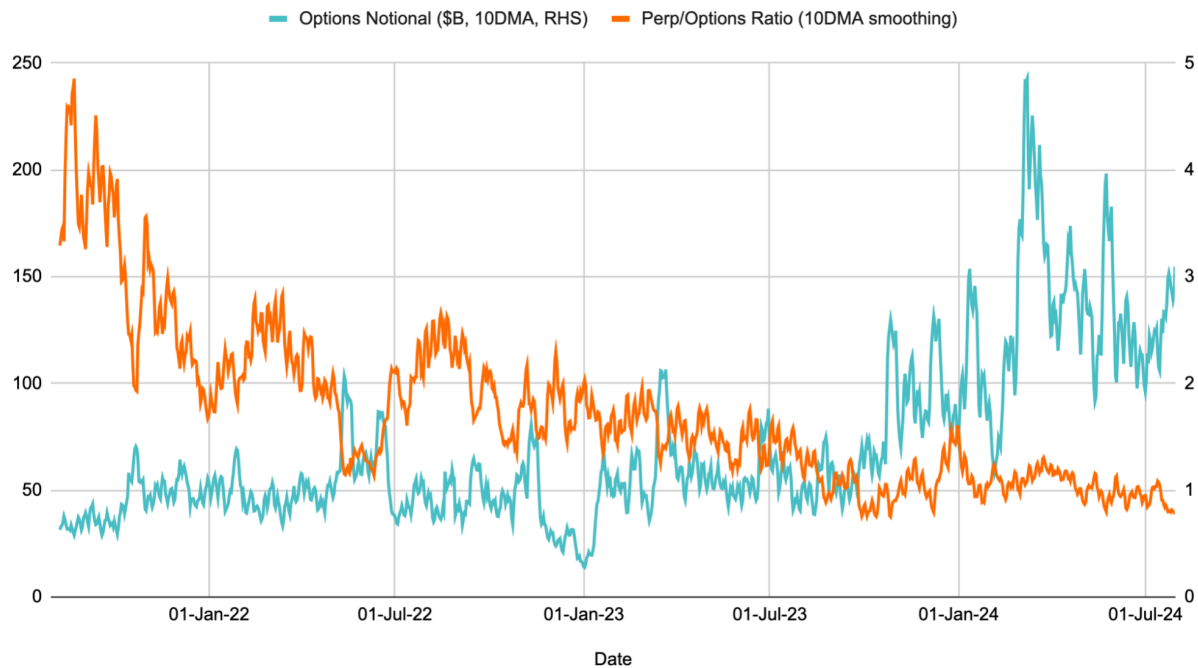
Figure 5: Deribit’s share of 24 hour options volume across exchanges (notional)



Source: Laevidas

A major appeal for options in traditional markets is the leverage they offer. However, given the prominence of perpetual futures and the leverage they offer, sometimes 100x or more, in crypto markets options have faced popularity headwinds particularly from the retail crowd (See [Crypto Derivatives Series I: Futures](#)). Despite this, the overall crypto options market has continued to grow, primarily driven by Deribit volume. This has in part been supported by Paradigm’s success, which, leveraging exchanges such as Deribit as settlement layers, has become an absolutely necessary OTC execution platform that facilitates bilateral block trading between institutions. In Figure 6, we can observe this impressive trend via the daily notional volume, perhaps propelled by this symbiotic relationship between Deribit and Paradigm. And although perpetual market volumes are still ~40x that of options’, the ratio of their daily volumes has been declining steadily over the past couple of years.

Figure 6: Global options daily volume and comparison to perpetual futures volumes



Source: Laevidas

A Word About Decentralised Options Exchanges

The rise of DeFi in the previous bull market saw various decentralised options exchanges being launched as well as vaults, which is a product that allows users to gain yield over some period by various options strategies such as covered calls. However, the decentralised options sector struggled, with many teams pivoting to offering tangential products or abandoning the idea completely. Options carry a plethora of complexities that make the growth of the market very challenging, especially from the market makers' perspective. The quality of the liquidity that market makers provide contributes to the user experience of an exchange greatly so anything that affects this becomes hurdles to success. An important aspect of market making is the ability to exit positions or hedge risks. Consider the following examples of a market-maker who is providing liquidity on a perpetual futures orderbook and an options orderbook.

Figure 7: Market making perps versus options.

	Scenario 1: Perp	Scenario 2: Options
<u>Situation</u>	MM has a bid and offer on the BTC/USDT perpetual orderbook.	MM has a bid and offer on the BTC-27DEC24-100000-C orderbook.
<u>Action</u>	Someone lifts the MM's offer and buys 1 BTCUSDT-P.	Someone hits the MM's bid and sells 1 BTC-27DEC24-100000-C.
<u>Exposure</u>	<p>The MM is now short 1 BTCUSDT-P.</p> <p>Now long the market (directional risk).</p> <p>The MM is also exposed to the perpetual funding rate.</p>	<p>The MM is now long 1 BTC-27DEC24-100000-C.</p> <p>Now long the market (directional risk).</p> <p>The MM is also exposed to the various Greek:</p> <ul style="list-style-type: none"> - Long delta - Long gamma - Long vega - Short theta
<u>Hedge</u>	<p><u>Directly</u> The MM can go long 1 BTCUSDT-P which is easy on most exchanges given that this is the most liquid crypto instrument.</p> <p><u>Other ways:</u> To hedge the directional risk, assuming the perpetual is USD-denominated, this is a USD linear instrument. The MM can simply buy one of the many equivalent instruments out there including the underlying spot BTC or a BTC future (both term and perp) on a different exchange.</p>	<p><u>Directly</u> The MM can go short 1 BTC-27DEC24-100000-C. However, as we discussed options are less liquid than perps, and hedging can be difficult particularly depending on the underlying coin, the strike, and the expiry.</p> <p><u>Other ways:</u> There exists no derivatives that track the various Greeks 1-1 meaning there is no simple hedge.</p> <p>All the methods for Greek exposure hedging is beyond the scope of this article, but even the simple pursuit of hedging the directional risk is non-trivial. Since the directional risk comes from the option's delta (which although is linear, delta itself changes non-linearly i.e. gamma), once you hedge this exposure with a linear instrument (like spot or USD-denominated futures), as the underlying price changes, you need to adjust your hedge size in USD-terms. This is what is called dynamic delta hedging, and for this MM it means that as the underlying BTC rallies, the positive gamma increases the option's delta, forcing the MM to short more BTC (via spot or futures) to maintain delta neutrality (and vice versa if BTC goes down).</p>

Source: Presto Research

Another reason for the difficulty options market making poses is the amount of different instruments that a market maker is often responsible for. If you as an exchange wanted to offer “a BTC perpetual exchange”, you can get away with offering one instrument, namely the BTC perpetual, and you can designate a single market maker to maintain this orderbook. However, if you as an exchange wanted to offer “a BTC options exchange”, you need to cater for all the various strikes and expiries that your customers may want:

- Strikes: what “step” do you choose for the strikes and how far out from current prices do you want to offer? For example, if BTC is \$70,000, do you offer strikes in \$100 increments for +-30% from spot? That’s 85 different strikes. But then you don’t offer a \$100,000 strike option ($70 \times 1.3 = 91$), and your users are asking for liquidity on the \$100k strike call. So maybe you provide +-50%. Now you have 141 strikes... And this is for one expiry only.
- Expiries: The most common strikes are end-of-month, end-of-week, and 1 DTE (1 day-to-expiry). Let’s say we want to offer expiries up to 1 year. Then we currently have tomorrow expiry (1 DTE), this Friday (end-of-week), and 12 monthlies (end-of-month). 14 in total.

In the above example, as an exchange you need to offer liquidity and separate orderbooks for 1,974 instruments ($141 \times 14 = 1974$).

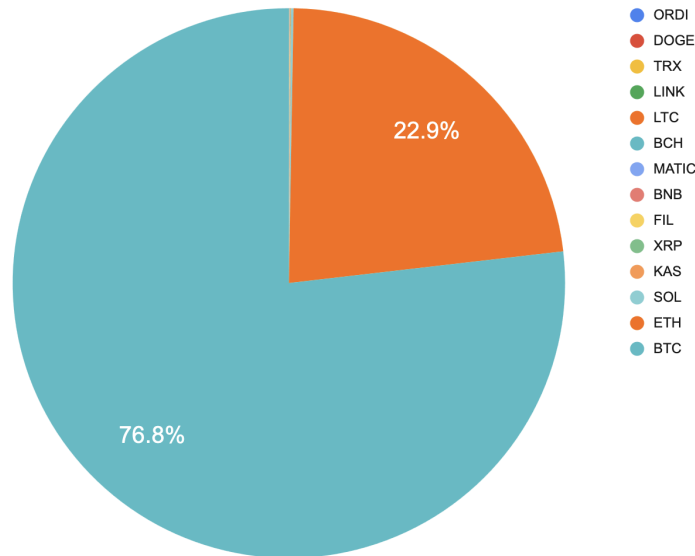
If we combine the above 2 difficulties (that are already simplified), and extend what this may mean for automated or algorithmic market making, you can imagine that the complexities for being an options market maker are exponentially higher than for futures.

With the early success of Deribit, compounded with the general difficulties that DEXs have faced (DEX volumes are lower than CEX volumes for perpetual futures as well), decentralised options trading has struggled to take off.

Underlying Assets

Currently, 99.7% of options volumes come from the majors (Figure 8).

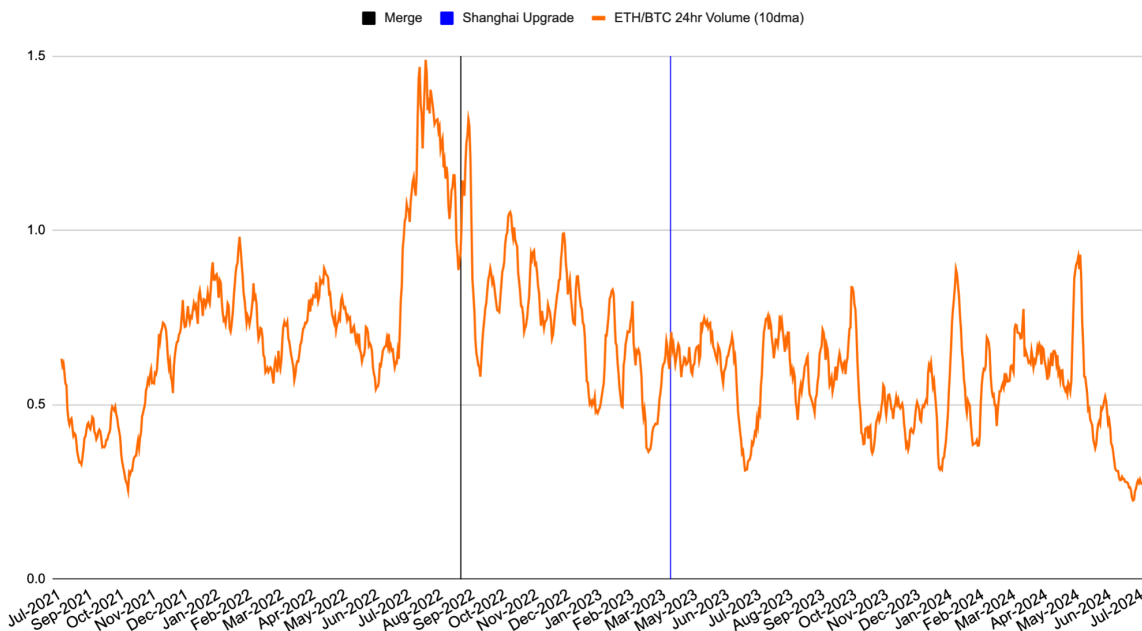
Figure 8: Share of underlying assets in global options daily volume



Source: Laevitas, 30Jun24

While Figure 8 is a snapshot taken on 30Jun24, BTC’s dominance has been near-consistent as we can see from a time series of the ETH/BTC 24hr volume ratio in Figure 9.

Figure 9: Ratio of ETH options volume to BTC options volume around ETH events.



Source: Laevitas

Expert Highlights

In this section, we hear from industry leaders about their experience and views on the crypto options market. We will have Deribit CEO Luuk Strijers and Paradigm/Paradex CEO Anand Gomes talk about the sector with a business angle, while co-founder of Arbelos Markets Joshua Lim and Presto Labs' very own Jun-Young Heo will give a trader's perspective.

Luuk Strijers: CEO, Deribit

Luuk is CEO at Deribit, the largest crypto options exchange and perhaps the exchange with one of the highest levels of trust among institutional players. In an industry that has been plagued by trust and regulatory issues, Luuk discusses Deribit's approach, and how they have come to be the dominant player they are today.

Deribit is the largest and most dominant platform for crypto options and futures trading, holding 85% of the crypto options open interest and 40% of the dated futures open interest.

We are the preferred choice for institutional investors, who contribute to around 80% of our volumes and open interest. These investors are drawn to Deribit due to its high liquidity, diverse custodial options, low latency matching, and strong reputation. To maintain our position as the top choice for institutions, Deribit has secured a spot and derivatives license in Dubai, audited financials, and SOC2 and ISO 27001 certifications. It also upholds high security standards, achieving an AAA rating on CER.live, and partners with various custodians like Copper Clearloop, Cobo, FalconX, Fireblocks, and Zodia.

Deribit is also planning to expand its global regulatory reach by seeking a MiFID license, reinforcing its commitment to remaining the leading platform in crypto options trading.

2024 has been great thus far with record volumes and new all time highs in open interest.

The most important next step is to activate the VARA license in Dubai and start operating as a fully licensed platform.

Anand Gomes: CEO, Paradigm and Paradex

Anand is the Co-Founder, CEO of Paradigm & Paradex. Paradigm has established itself as a leader in the OTC execution of crypto derivatives block trading, offering unparalleled liquidity through its RFQ and orderbook functionalities. Paradex, incubated by Paradigm, is a High-Performance Decentralized Exchange Engineered for Open Finance. Anand introduces his companies, now leaders in their markets, and shares his vision for the future of Paradex.


Since 2019, Paradigm has established itself as the leading institutional over-the-counter (OTC) trading platform in the cryptocurrency space, and today facilitates over \$15 billion in monthly volumes representing 25-30% of the total options volume cleared through Deribit.

At the core of Paradigm's success is its ability to provide deep options liquidity for large size and multi-leg block trades with atomic execution, all while minimizing market impact by leveraging off-exchange execution. This value proposition is critical for institutional traders, particularly in periods of high volatility when liquidity on most platforms dries up. Paradigm is 100% free to use and no user is worse off executing on Paradigm vs. on-exchange in terms of fees.

Paradigm has the largest institutional network in crypto with over 1,000 institutions and +30 dedicated market makers on the platform. This network underpins the deep liquidity and tight bid-offer spreads found on Paradigm.

Recognizing the growing demand for decentralized finance (DeFi) solutions, Paradigm has incubated Paradex, a high-performance decentralized exchange (DEX) engineered for open finance.

Launched in October 2023 and currently in open beta, Paradex represents the next evolution in on-chain cryptocurrency trading. Built on its own high performance L2 blockchain, Paradex combines deep liquidity, capital efficiency, and high performance with the benefits of self-custody, transparency, and community governance. Despite still being in beta, Paradex has achieved several key milestones including:

 **\$36B** lifetime trading volume

 **\$150M** ADV and growing

 **55** live perpetual futures markets

*Looking ahead, the Paradex roadmap includes several new and exciting product launches, most notably **decentralized asset management via an innovative new on-chain vault primitive**. Paradex vaults will enable a two-sided marketplace to emerge where sophisticated fund managers will be able to deploy any strategy of their choosing while sourcing capital from any Paradex user interested in earning a passive yield. Vaults will provide a turnkey solution for both funds and investors and will democratize access to both sophisticated trading and investing strategies as well as capital like never before. Paradex plans to launch the very first version of its vaults primitive in September, stay tuned for updates!*

Finally, in order to foster community engagement and growth, Paradex has implemented both a points program that rewards users for trading volume, open interest, and total value locked and a referral program to incentivize peer to peer growth.

Joshua Lim: Co-Founder, Arbelos Markets

Joshua Lim is co-founder and CEO of Arbelos Markets, a principal liquidity provider in crypto derivatives markets. Prior to Arbelos, Josh started the derivative trading desks at a number of large platforms including Galaxy Digital and Genesis Trading; his TradFi background is primarily in equity derivatives trading.

*Since its founding in 2023, Arbelos has been helping to rebuild the crypto derivatives markets – driven by the needs of its largest bilateral OTC market participants – in a way that addresses head on the lapses of the last crypto cycle. We provide liquidity across the three major arenas in which derivatives trade: 1) **bilaterally** between sophisticated institutional market participants, 2) on **centralized exchanges** like Deribit and CME and 3) **on-chain** in perp and option orderbook DEXes.*

Despite being a relative newcomer to the space, Arbelos is fortunate to be backed by top venture firms and strategic partners like Dragonfly, Deribit, FalconX, Circle and Paxos; and to have the trust of a broad network of trading counterparties from our founding team's prior industry experience. We are a tight-knit team of traders and quant engineers specializing in options pricing models, risk systems, alpha signals and electronic market-making. We've helped to facilitate over \$60 billion notional volume in bilateral and listed options blocks and are currently the number one block liquidity provider globally on Paradigm.

Why is Arbelos focused on derivatives in crypto and options in particular?

We believe that as crypto matures, the mix of market participants has shifted away from retail participants toward institutional investors that demand more bespoke risk expression, nuanced hedging strategies, structured products and yield generation programs that only options can provide. Options, both vanilla and more exotics ones with path-dependency or embedded correlation risk, are useful tools that can be wielded by institutional practitioners with more precision than perpetual swaps which are more relevant for retail users.

*As we've seen in other asset classes like FX and credit, crypto's market structure has coalesced around a small set of trusted centralized dealers that have the balance sheet, relationships, pricing / risk management capabilities and creative financial engineering chops to service the hedge funds and corporates that need liquidity. Bilateral liquidity from dealers is critical for asset managers for many reasons. First, dealers provide better **pricing** than listed venues on large, concentrated blocks of risk because they can often source the other side of the trade through their network. Second, dealers provide **access** via preferred formats (ISDA papered trades, NDFs) or customized structures (combos or exotics) that allow firms to construct payoffs and put on risk they might not be able to otherwise. Third, dealers have better **connectivity** to hedging venues and execution technology to achieve optimal hedging.*

Arbelos is winning institutional dealflow by providing to its key trading relationships both real-time visibility and verifiability across its portfolio of risk – so that those counterparties can accurately assess the financial strength of our firm. We leverage some tooling from quantitative finance to describe the factor risks and greeks of our portfolio as well as some of the cryptographic underpinnings of blockchains to selectively reveal and deliver this information in an intelligible way to our counterparties.

Transparency is critical in crypto because the root cause of the 2022 crypto crisis was the lack of real-time visibility into counterparty risk (particularly important in our fast-moving asset class) and

the accumulation of highly correlated risk positions across many firms resulting from that opacity. Many forms of risk, like basis spreads, credit exposure, duration and liquidity risk were ultimately reduced to the single dimension of directional market beta because of the concentrated and correlated nature of books across multiple firms.

What are some of the major topics for crypto derivatives markets in the year ahead?

First, we are keenly watching the growth of DeFi marketplaces like Aevo, Lyra, Hyperliquid vs centralized venues like Deribit. Deribit has occupied a special niche in crypto by being an accessible Schelling point for both retail and institutional liquidity. DeFi venues are further left of it, appealing more to retail and crypto-native users who also value anonymity and on-chain security while CME and potentially upcoming ETF options are further right of it, appealing more to tradfi investors. Perhaps the center of gravity will shift one way or the other, but we like the positioning of Deribit and their proactive approach to moving collateral to off-exchange solutions like Clearloop.

Second, the back half of 2024 contains a number of explosive market catalysts including the first cuts of the interest rate cycle; the US elections which will determine if there will be a wholesale shift in government policy toward our industry; the resolution of litigation around securities issues that could open the door to more ETFs on more assets; and the final innings of liquidations and distributions from multiple bankruptcy estates. All of these catalysts create tradable opportunities for keen portfolio managers – for example we see a lot of calendar spreads taking advantage of the flat term structure around events or expressing directional market views either in basis spreads (term futures vs spot) or in skew trades on the vol surface that have some correlation to spot.

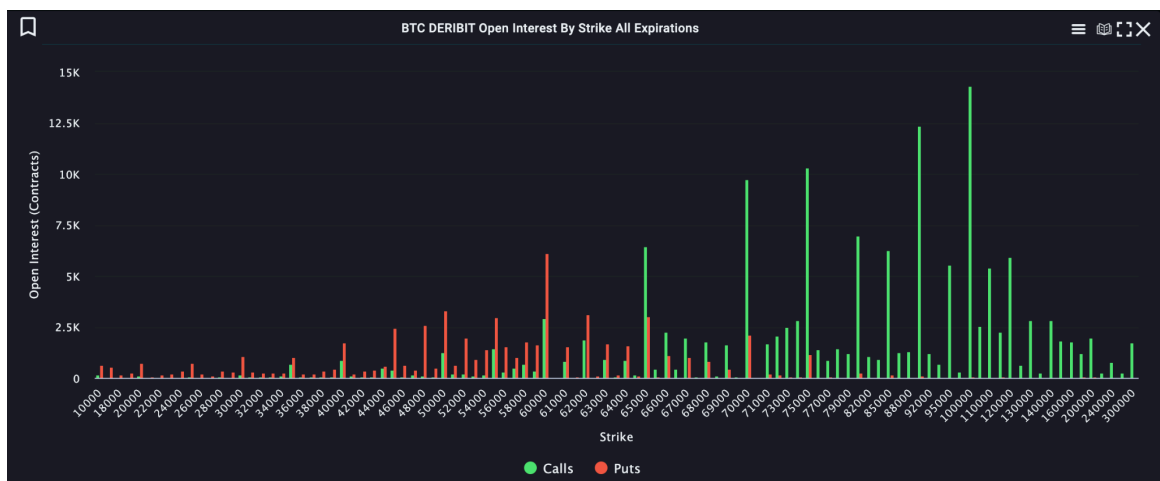
Third, we are in the midst of an industry-wide reimagining and debate on the nature of crypto assets. Bitcoin seems to have firmly entrenched itself as a store-of-value asset, a now globally-acceptable investable asset class and portfolio diversifier in macro books. Where does that leave ETH – an asset that seems to have reached a valuation that reflects its network value as a distributed computing platform, but needs to make the jump into store-of-value to unlock another 10x in market cap? Are SOL and other alt L1s viable challengers and thus cannibalizing investor mind and wallet share? What about the ever expanding set of token issuance associated with these new networks, both L1s and L2s, and what feels like a stealthy form of token inflation by another name? In a bull market of course there is fresh capital inflow to sustain lofty altcoin valuations but with the Bitcoin ETFs sucking up all the air in the room there isn't much fresh capital into alts yet this cycle. Will rate cuts spur a new bout of animal spirits and a retail flood back into alts and more speculative assets like NFTs?

No matter how these open questions resolve, we at Arbelos are excited to see how the market develops and hope to interact with you all as fellow participants!

Jun-Young Heo: Derivatives Trader, Presto Labs

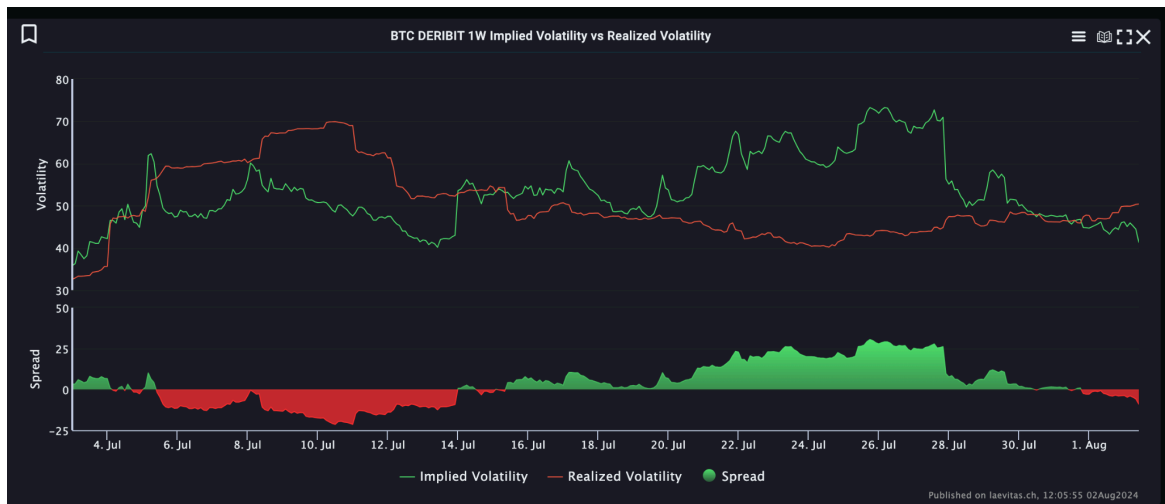
Jun-Young is a derivatives trader in Presto Labs. He started his career as an equity derivatives trader in Samsung Securities trading exotic options and moved into crypto space in 2021. Below, Jun-Young goes through some of the advantages of options that we haven't yet explored in this research report.

Crypto options are very useful tools for sophisticated traders to build positions based on their views. By using combinations of option instruments, traders can take advantage of more delicate payoff from option positions compared to purely using spot and futures contracts. Call spread, butterfly, call ratio, call diagonal spread, and many other option combinations can be used for leveraged bets on the upside of Bitcoin without liquidation risk. Option traders can also earn profits during muted market movements by selling out of the money options. Crypto option exchanges are very friendly to users with small capital, so even retail traders can use option strategies like hedge funds. Minimum order size of combo trades in centralized exchanges such as Deribit is very small so that small sized traders do not need to pay excessive spread cost to build desired position. Alternatively, crypto investors may trade directly with option market makers for trading in bigger sizes without publishing trade history or seeking customized tenor and structure. Presto can also provide quotes for options and tailored solutions according to the investor's view.



Current BTC and ETH open interest numbers indicate that market participants in general are betting more on the price increase (especially for Sep24 and Dec24 expiry), and this is affecting spot-vol dynamics to be positive. It means when bitcoin price goes up, implied volatility goes up and vice versa. And it is also true that there are degenerate traders who buy more to follow the momentum when prices are moving up and push up the funding rates, basis yield, and implied volatility altogether.

This phenomenon gives some opportunity to volatility traders, since there are many times when the gap between option implied volatility and realized volatility becomes large. For example when BTC price was crashing to 53K on July 4th, weekly ATM option implied volatility was below 50% although intraday hourly realized volatility was hitting more than 70% on the same day. In contrast, right before 2024 Nashville Bitcoin conference realized volatility was around 50%, but weekly implied volatility was hitting above 70% as BTC price was trending up. Of course this spot-vol dynamics always change according to market sentiments and events, but it shows crypto options also can be attractive for sophisticated volatility traders.



Final Words

The crypto options market has demonstrated significant growth and resilience despite various adoption challenges. Dominated by Deribit and driven largely by institutional players, the market has seen the rise of OTC platforms like Paradigm, catering to sophisticated traders and complex derivatives. While BTC and ETH currently monopolise the options market, there's potential for volume growth in altcoin options. The struggle of decentralised options platforms highlights the complexities of options market-making in DeFi, yet innovations like Paradex suggest evolving possibilities.

Looking ahead, an overall increase in crypto interest as well as an increase in institutional volumes are likely to shape the landscape. As the market matures, we can expect crypto options to play an increasingly significant role in the broader crypto derivatives ecosystem, potentially opening up further opportunities for both traders and businesses. The continued evolution of market structures, blending centralised, decentralised, and OTC approaches, may further enhance liquidity and accessibility, solidifying the importance of options as a crucial tool for risk management and sophisticated trading strategies in the crypto industry.

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