Cryptocurrency Derivatives: An Introduction

Intro

The cryptocurrency market is currently comprised of many exchanges that offer some form of derivatives trading. A derivative is a contract that derives its value from an underlying asset. Various types of crypto derivatives exist, each of which provides traders with certain benefits and drawbacks.

Futures

A futures contract is the promise to purchase an item at a set price on a future date, called the**expiration date**. In the cryptocurrency space, brokers often offer leverage of up to 125x and margin calls are automated through innovative liquidation engines. These liquidation mechanisms are, as of now, developed and used only by cryptocurrency derivative exchanges.

One of the main advantages futures contracts offer is the ability to hedge your risk. Miners often utilize this. For example, if a miner earning bitcoin wanted to hedge his risk against the united states dollar he could short bitcoin futures.

Additionally, contracts can cost as low as 1 USD which is attractive to traders who do not have access to large amounts of capital.

Crypto Futures in the Traditional Market

Bitcoin futures are currently traded on the Chicago Mercantile Exchange (CME) which is the only non-native crypto exchange that is providing futures in the United States as of now. Trading this contract is as close to the traditional market as you are going to get. One contract is valued at 5 bitcoin.

Advantages

- Available in traditional markets and cryptocurrency markets
- Hedge Risk
- Up to 125x leverage available

Disadvantages

- Increased Risk
- Need a relationship with a CME Broker in order to trade in traditional markets
- Significant amount of capital is necessary to trade in traditional market

Perpetual Swap

The perpetual swap contracts are among the most popular assets to trade in the cryptocurrency market. The perpetual swap market behaves like a leveraged spot market and functions very similarly to a traditional crypto futures contract with one significant difference. #### Funding Rate The main difference between futures contracts and the perpetual swap contracts is that perpetual swaps do not have an expiry date. Since the price of the contract is never settled, its price can fluctuate above or below the index price. Because of this, there is a required **funding rate** which incentivizes traders to enter short or long positions. The goal of the funding rate is to continuously bring the contract price closer to the index price. This is how it works: If the current price of the contract is above the index price, long positions pay a fee to short positions (positive funding rate), which would increase the demand for short positions. If the current price of the contract is below the index price, short positions pay a fee to long positions (negative funding rate), which would increase the demand for long positions. The funding rate is continuously recalculated and therefore the index prices and contract prices are **usually** nearly identical.

Advantages

There are many advantages to trading perpetual swap contracts instead of futures, options or spot trading.

- High Volume and Liquidity
- Up to 125x leverage available
- Minimal KYC restrictions

Disadvantages

Despite the advantages they offer, there are disadvantages to trading perpetual swap contracts.

- Increased Risk
- Not available in certain countries (including the United States of America)
- Minimal Regulation
- Limited variety

Options

An options contract is an agreement between two entities to potentially facilitate a transaction on the underlying security at a preset price, referred to as the strike price, prior to the expiration date.

There are two types of options – **call options** and **put options**.

A **call option** is the right to buy the underlying asset at the strike price on the expiry date. The buyer is betting that the price of the asset will increase.

A **put option** is the right to sell the underlying asset at the strike price on the expiry date. The buyer is betting that the price will decrease.

Option Styles

The most popular exchange to trade Bitcoin and Ethereum options is Deribit. As stated on their website

> All options on Deribit are **European style,** which means they can only be exercised at expiry, unlike **American style** options, that can be exercised any time until expiry.
>
> Options on Deribit are also **cash-settled,** which means when they are exercised, it is only the profits that are paid.

> *For example, if a Bitcoin call option with a strike price of $5,500 expires when the Bitcoin price is $6,000, then $500 would be the profit paid from the seller to the buyer.*
>
> On Deribit, options are exercised automatically at expiry, meaning any intrinsic value remaining is paid as profit from the seller to the buyer. If the option expires worthless, then nothing is paid.
>
> ### Closing an Option Position Early
>
> European options are not exercised until the expiry date; however, this does not affect your ability to buy and sell the option freely before that date. For example, if you bought a call option with 30 days left to expiry and wanted to sell it just 5 days later after an increase in the price, you are free to do so.

Advantages:

- Limited risk while maintaining large profit potential
- Position that cannot be stop hunted or liquidated
- Advanced Strategies

Disadvantages:

- You have to pay a premium for the option
- If the price fails to move, your option will lose value every day
- There is a time limit for your trade to work out, as the option has an expiry date

Conclusion

Derivatives trading in cryptocurrency has continued to grow throughout the years and it's easy to tell why. Cryptocurrency derivatives exchanges offer innovative solutions to problems presented in traditional markets. Solutions such as liquidation mechanisms, up to 125x leveraged positions and settlement in cryptocurrency to provide a purely digital experience are retaining and attracting new users.

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References

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