BITNOMIAL

Bitnomial Exchange - Miner Case Studies

Trade the Bitcoin Complex®

- US Based & CFTC Regulated
- Bitcoin, Deci-Bitcoin, and Hashrate Margined Futures & Options

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Case Study - Hold Bitcoin with Capital Efficiency

Benefits of this strategy:

- **Maintain BTC Exposure, while freeing up ~70% of capital on balance sheet**

Use this strategy instead of:

- **Holding physical BTC on balance sheet**
- **Getting an expensive, over-collaterallized USD-loan on BTC with counter-party risk**

Consider the case of a bitcoin miner who has mined 100 BTC and wants to hold those coins to take advantage of the recent surge in bitcoin prices, but also needs access to liquidity in dollars to cover operational costs like electricity. One option is to sell the bitcoin on a spot exchange, but this would prevent the miner from realizing gains on bitcoin price appreciation. Borrowing dollars from a lender using bitcoin as collateral is another option, but it comes with potential drawbacks such as high-interest rates, counter-party risk, and over-collateralization requirements.

Instead, the miner could use Bitnomial bitcoin futures contracts. By doing so, the miner could lock in a guaranteed dollar value for their bitcoin, while still retaining exposure to potential upside price movements and receiving dollars in the short-term.

For example, let's assume that the current bitcoin price is $50,000 per BTC. The miner could sell 100 March BTC contracts (each representing 1 bitcoin) at a price of $50,350 per BTC. This would guarantee the miner a payout of $5.035M at the end of March, regardless of what happens to the bitcoin price.

At the same time, the miner could buy 100 April BTC contracts at a price of $50,750, allowing them to benefit from any price appreciation that occurs until the end of April. If the price of bitcoin were to rise to $60,750 per BTC, the miner would effectively have earned an additional $1M in value ($60,750 – $50,750 = $10,000 x 100 bitcoin), on top of the $5.035M payout from the sale of the first futures contract.

The margin requirements to put on and maintain this position, assuming constant price, are as follows:

- Short 100 March BTC Futures at $50,350
- Long 100 April BTC Futures at $50,750
- Calendar Spread Credit @ $2200 per 1:1 Contract Spread = $2200 * 100 = $220k

After the first contract's expiration in March, the margin requirements to maintain this position, assuming constant price, are as follows:

- Long 100 April BTC Futures at $50,750 at 27% margin requirement = $1,370,250

By using bitcoin futures, the miner can unlock **$3,704,750** in liquidity in dollars while still retaining exposure to potential bitcoin price movements. This can help them manage their cash flow and reinvest in their mining operations, all while maintaining bitcoin exposure.

Alternatively, this strategy can also be executed by selling spot bitcoin on a spot exchange while simultaneously buying futures contracts on Bitnomial. This has some trade-offs and considerations including prices between Bitnomial and spot exchanges and their associated fees. At $50k per BTC, Bitnomial's fees at $2 represent 4/10 bps in fees.

Case Study - Earning Yield By Writing Covered Calls

Benefits of this strategy:

- **Earn yield on BTC, while freeing up to ~70% of capital on balance sheet**

This scenario is a evolution of the previous example where a miner converted their physical spot BTC into long BTC futures. Earning yield can be generated by writing covered calls (selling call options) and earning a premium while relying on the long BTC futures position for risk management.

Let's consider the scenario where a miner is already long 100 March BTC contracts at $52,140 and wants to sell call options against that position. The miner could sell 100 March $50,000 calls for $4,000, totaling **$400,000** in total premium.

The margin requirements to put on and maintain this position, assuming constant price, are as follows:

- Long 100 March BTC Futures at $52,140 at 27% margin requirement = $1,642,900
- Short 100 March BTC $50,000 Calls at $4,000 = $400,000
- Total margin requirement = $1,642,900 + $400,000 = $2,042,900

In the scenario where the settlement price of the March BTC contract is below $50,000 at options expiration, the options expire worthless and the miner would result in a total profit of **$400,000** from the call writing.

In the scenario where the settlement price of the March BTC contract is above $50,000 at options expiration, the miner is obligated to sell the long 100 March BTC Futures at $50,000. For example, if the price of the March BTC Futures contract settled at $60,000, the profit is **$186,000** ($400,000 - $214,000). $214,000 represents the loss of buying 100 March BTC at $52,140 and subsequently selling the contracts at $50,000 at options expiration ($52,140 - $50,000).

Case Study - Hedge Hashrate Exposure With Hashrate Futures

Benefits of this strategy:

- **Lock-in a hashrate price to prevent downside hashprice exposure**

Let's consider the scenario where a miner produces 100 PH/s/day. The miner calculates a breakeven hashprice of $45 per unit of hashprice of PH/s/day for the next 30 days. The miner is able to sell 100 PH/s/day on the futures market for $52 PH/s/day for 30 days.

The margin requirements to put on and maintain this position, assuming constant price, are as follows:

- Short 100 March HUP Futures at $52.00 PH/s/day at 35% margin requirement = $52.00 PH/s/day x 30 days x 35% = $54,600
- Notional value of position is $156,000

Here is the PNL of the trade with different final settlement price scenarios on 3/27, which is the contract expiration date:

- Final settlement of $42 (Contract value of $135,000). PNL = $156,000 - $135,000 = $21,000
- Final settlement of $35 (Contract value of $105,000). PNL = $156,000 - $105,000 = $51,000
- Final settlement of $58 (Contract value of $174,000). PNL = $156,000 - 174,000 = -$18,000

Hedging hashrate is a critical tool to manage hashrate exposure. If the miner's hashrate stays constant, but hashprice decreases, the miner stands to gain from the downside move. If the miner's hashrate stays constant and the hashprice increases, the miner gains from higher hashprice minus the cost of the hedge.

Case Study - Hold Bitcoin & Hedge Hashrate With Margin Offsets

Benefits of this strategy:

- **Lock-in a hashrate price to prevent downside hashprice exposure**
- **Maintain BTC Exposure, while freeing up ~70% of capital on balance sheet**

Let's consider the scenario where a miner produces 100 PH/s/day. The miner calculates a breakeven hashprice of $45 per unit of hashprice of PH/s/day for the next 30 days. The miner is able to sell 100 PH/s/day on the futures market for $52 PH/s/day for 30 days. The miner simultaneously buys 10 March BTC Futures at $50,750 to maintain BTC exposure on balance sheet.

The margin requirements to put on and maintain this position, assuming constant price, are as follows:

- Short 1,000 March HUP Futures at $52.00 at 35% margin requirement = 52.00 x 30 x 1000 x 35% = $546,000
- Long 10 March BTC Futures at $50,750 at 27% margin requirement = $137,025
- Inter-commodity Spread Credit @ 50% per 10:1 Contract Spread* = ($137,025 + $54,600) x 50% + $491,400 = $587,212.5
- Versus $683,025 of required margin without spread credits, **unlocking $95,812 in additional USD liquidity**

Portfolio margining with margin offsets and spread credits are a common way to hedge exposure capital efficiently. Since both bitcoin futures and hashrate futures are traded and margined together at Bitnomial Exchange, offsets can be granted for hedging unlocking more USD liquidity.

** Margin offets are TBD and expected to be available in August, 2024. Offsets and credits are subject to change.*

About Bitnomial Exchange

Bitnomial is a US-based, CFTC regulated futures & options exchange that launched in 2021. Bitnomial is the largest, physical BTC futures & options market in the US. Bitnomial uses a centralized clearing model that allows participants to trade with other market participants to have their trades guaranteed by a central counter-party, just like traditional commodities markets. Since counter-party risk is mitigated, market participants are confident in their ability to hedge and manage their physical BTC risk, while receiving capital efficiency on their balance sheet.

To begin trading, market participants must use a Futures Commission Merchant ("FCM") as a broker. Sign-up & Register with one of the FCM's below to get started.

Sign-Up & Register

- **Bitnomial Clearing, LLC - Sign-Up @ https://bitnomial.com/clearing/signin/**
- **Marex Capital Markets Inc. - Contact Brooks Dudley @ bdudley@marex.com**
- **R.J. O'Brien & Associates, LLC - Contact Matt Heidkamp @ mheidkamp@rjobrien.com**
- **StoneX Financial Inc. - Contact Ryan Mitchell @ Ryan.Mitchell@stonex.com**

Contracts

- **Bitcoin Futures**. 1 BTC physically delivered
- **Deci Bitcoin Futures.** 1/10 BTC physically delivered
- **Bitcoin Options**. 1 BTC Physically delivered options
- **Hashrate Futures.** 1 petahash per second for 30 days. Cash-settled.

Trading Platforms

- **Direct Market Access via low-latency binary protocols**
- **CQG**
- **Actant**