



# The Weekly Hash, 10/18/21

## First Bitcoin Futures ETF Driving Price and Contango

Bitcoin gained 12.4% week-on-week (WoW), settling at \$61,462 as of midnight UTC on 10/17. The recent approval and imminent launch of the first futures-based bitcoin ETF has resulted in price maintaining its stance in the low \$60,000s since Friday.

ProShares is expected to launch a Bitcoin futures ETF on the NYSE on Tuesday, according to multiple news sources. Bitcoin price rallied following updated expectations of the launch, along with a recovery in the contango on the CME (see following slide). Rising open interest (+47% in two weeks), particularly in the October and November contracts, further speaks to market positioning ahead of the funds implementing futures roll strategies that would drive up open interest.

Total BTC earnings per PH/s are ~6.39 mBTC, down from ~6.4 mBTC / PH/s last week on a slight decrease in transaction fees (1mBTC or milliBTC = 1/1000 BTC). Transaction fees fell 16 bps WoW to 1.1% of miner rewards, or 0.07 BTC per block. The "Mempool" shows low congestion levels, with only ~6,000 pending transactions.

Bitcoin mining revenue gained to \$393 / PH/s per day and \$429/MWh driven by the recent spot increase. The next difficulty reset should occur later today and result in a modest ~0.9% difficulty increase, so the mining flow should stay about level for now.

The BitOoda North American Hash Spread™ gained 14.1% from \$342 to \$391. This gain

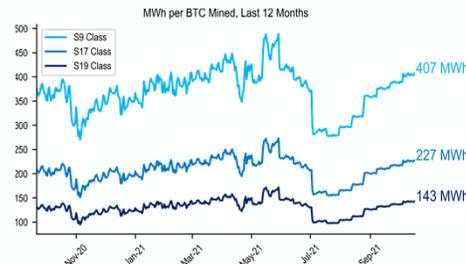
can be attributed to Bitcoin price approaching prior all-time highs, as power prices have remained relatively stable.

We define the BitOoda Hash Spread™ as the difference between the cost of power per MWh and the Bitcoin mining revenue per MWh. This gives miners a quick sense of the surplus generated by their business to cover personnel, overhead, depreciation, and profit. The weighted average around the clock U.S. wholesale industrial power price (5 markets) of \$37.09 / MWh leads to an aggregate spread of \$391.

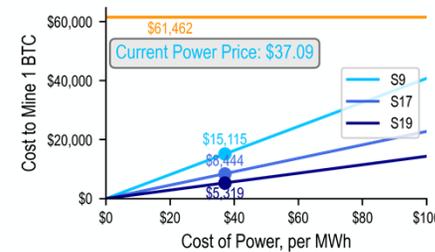
	S9 Class	S17 Class	S19 Class
Hash Spread	\$114	\$233	\$391
Week on Week	19.3%	15.5%	14.1%

Older-gen S9-class devices saw their Hash Spread™ up ~19% to \$114/MWh. S17-class devices, the bulk of the installed base, saw a hash spread of about \$233/MWh.

It now takes 143 MWh to mine 1 BTC using S19-class rigs, while S17-class machines consume 227 and S9-class machines consume 407 MWh.



The 143 MWh required to mine 1 BTC with S19-class rigs translates into \$5,319 in power expense. It costs \$15,115 using S9 rigs, a ~75% margin, excluding labor.



### Takeaways

- The first bitcoin ETF is set to launch tomorrow, garnering attention as price reapproaches its all-time high
- CME Futures open interest has increased 47% in two weeks, with a recovering contango as the market positions for an anticipated increase in contract demand upon fund launch
- Mining economics have improved following the recent rise in Bitcoin spot, and a benign difficulty reset and renewed investor interest in BTC with the ETF should help preserve mining margins
- Increased liquidity in the CME contracts should benefit North American miners' hedging needs: they are the natural opposite trade to the Futures ETFs

## Research

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BTC Price \$61,682  
 (10/18 at 10am EDT)

Obs Hashrate 155EH/s

### Key Takeaways

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# Contango Bounces Back Open Interest Rises

- The recent price move drove the contango upward beginning a week ago, although it has moderated slightly since then
- December contracts trade at a 2.3% premium to spot, down from 2.5% a week ago, but up from 1.5% 15 days ago
- CME open interest increased 47% from under 8000 lots to 11862 lots
- Most of the increase came in the active October and November contracts
- There is no liquidity in the out contracts, though
- While we have not studied the prospectuses for the imminent BTC futures ETFs, we assess this reflects traders positioning ahead of their launch

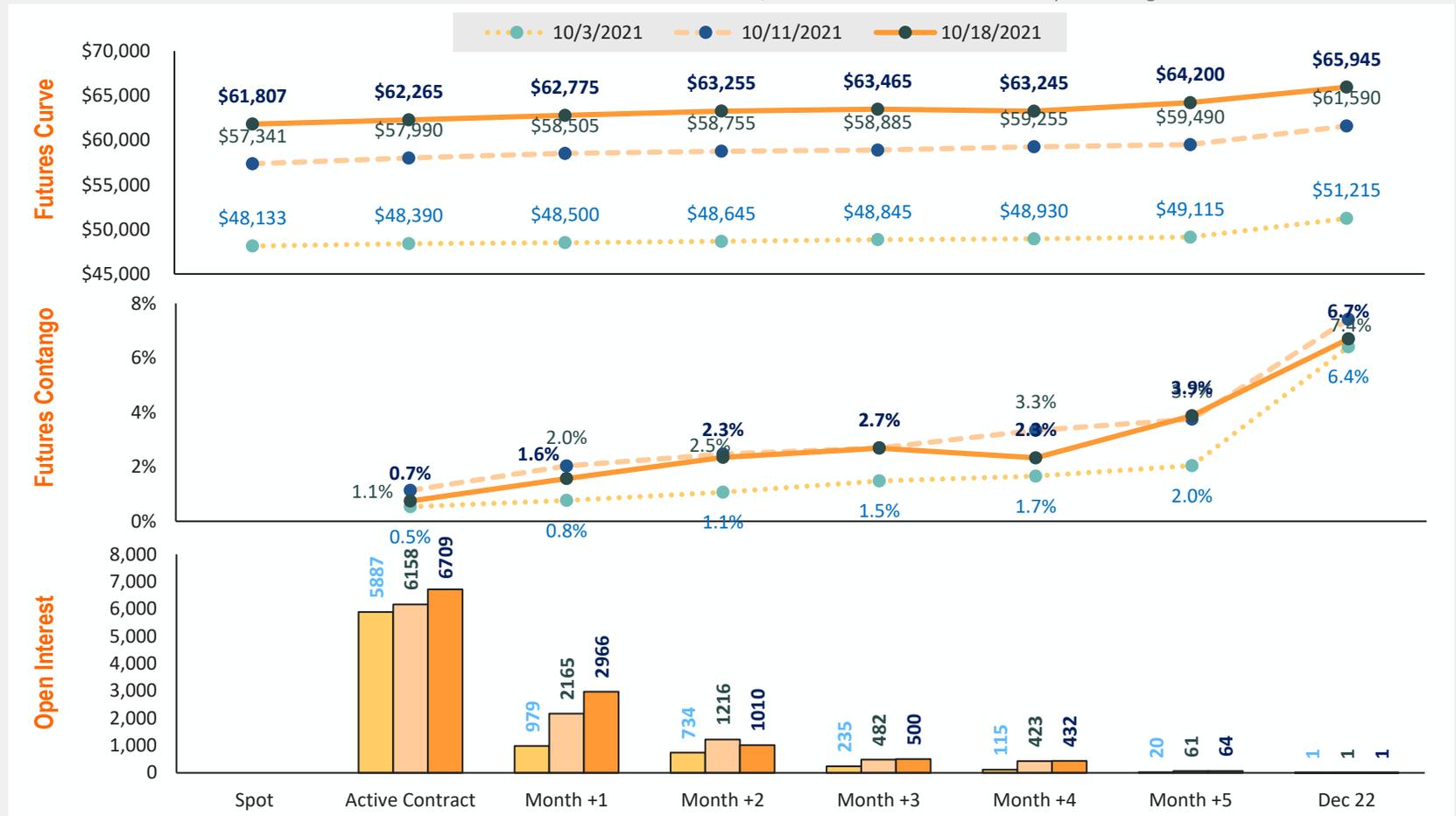


Figure: Bitcoin futures metrics

Source: Bloomberg

# BitOoda Hash™ Dashboard

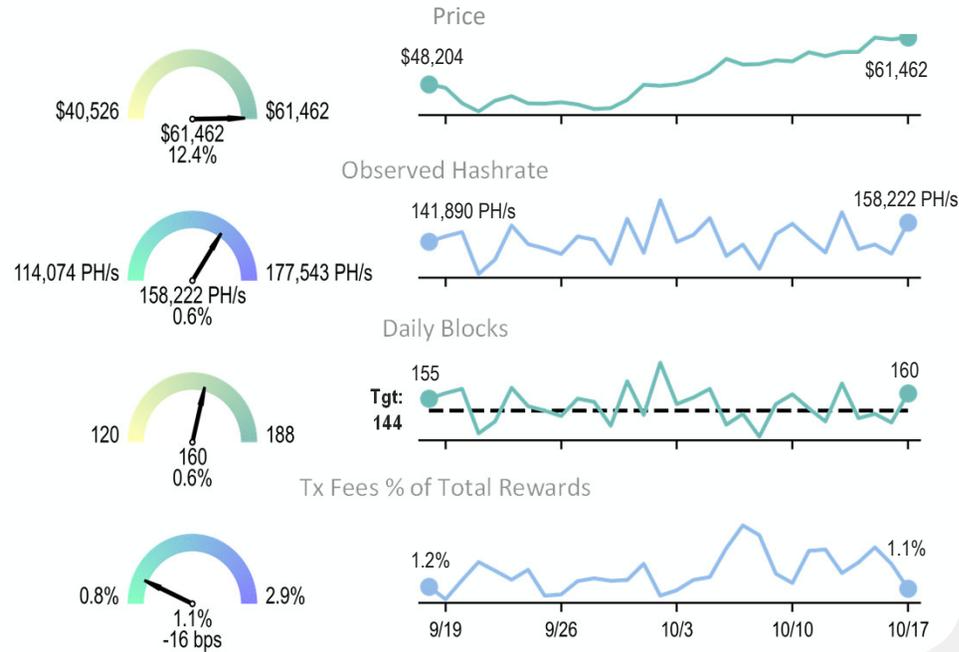
October 18, 2021

### Definitions

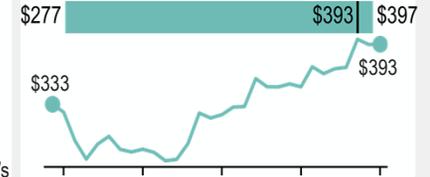
**Hash Spread:** the difference between the revenue per MWh from mining BTC and the weighted average cost of peak and off-peak power across 8 US zones. It is a quick measure of the profitability of US-based latest-generation mining rigs.

**MWh:** Megawatt hour  
**PH/s:** Petahash per second  
**Tx Fees:** Fees for BTC transactions

### 30 Day Range and 7-day % change



### Daily Revenue per PH/s



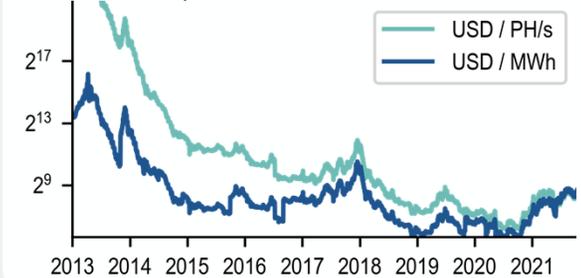
### Revenue per MWh (\$19 Class)



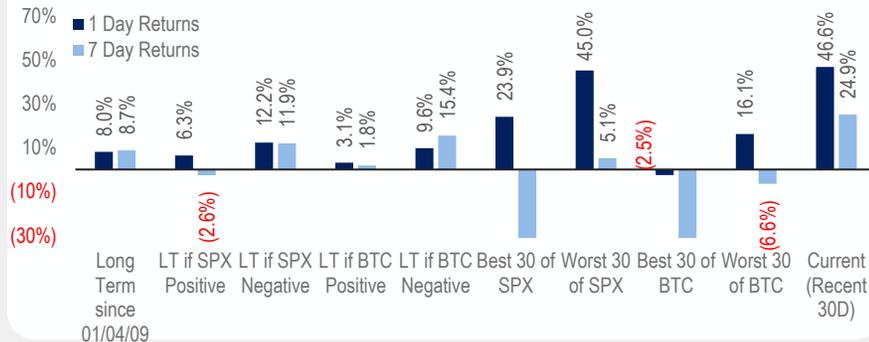
### BitOoda North American Hash Spread™



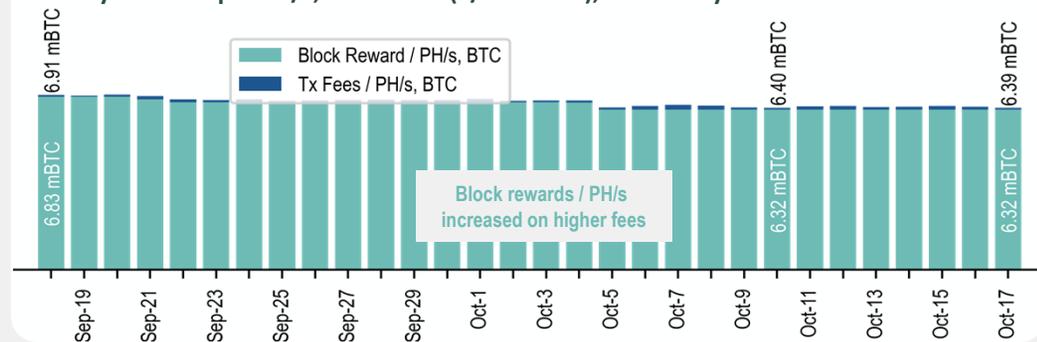
### Revenue, since 2013



### Historical BTC Correlation to S&P500



### Daily Rewards per PH/s, in milliBTC (1/1000 BTC), last 30 days





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