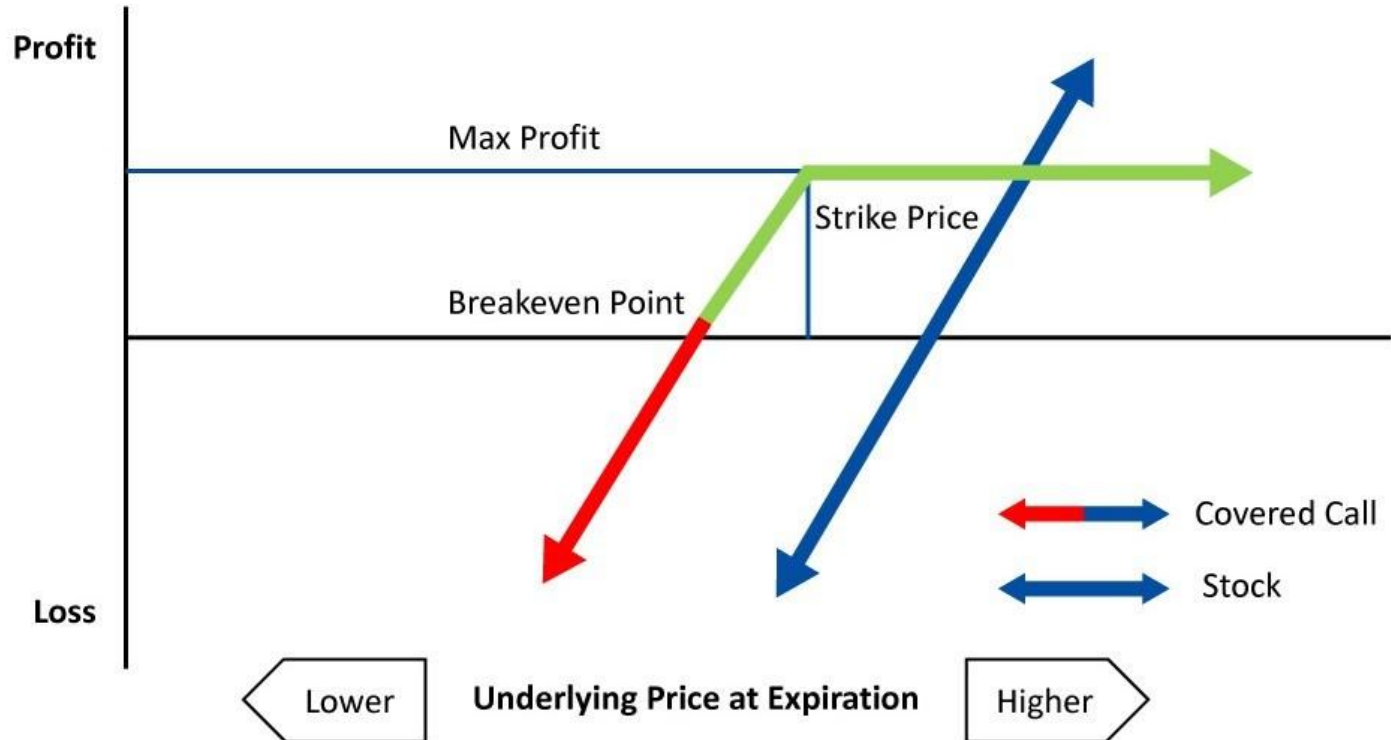


High yield  
Structured product

# Covered call payoff

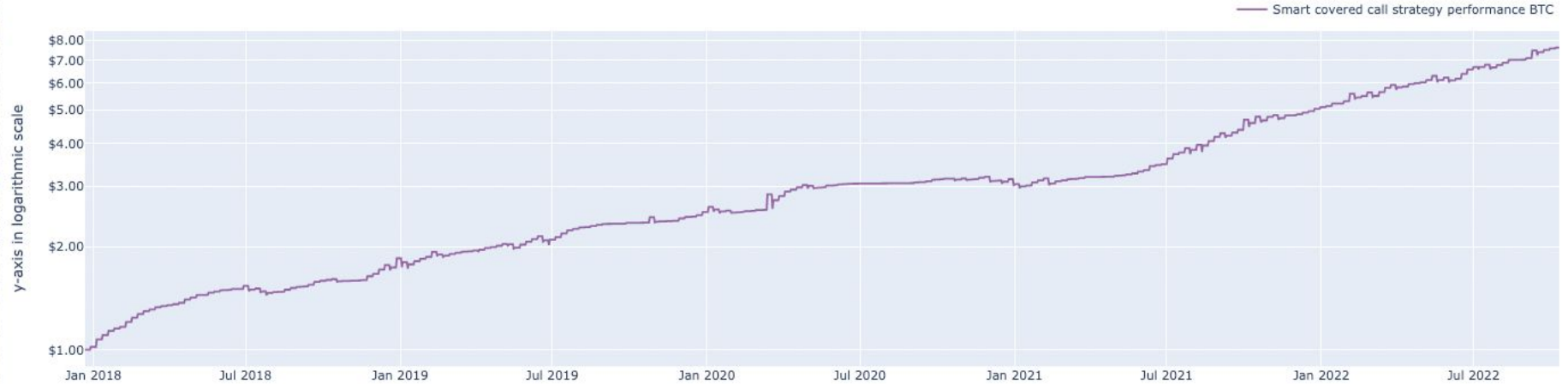


## Two obvious strategies

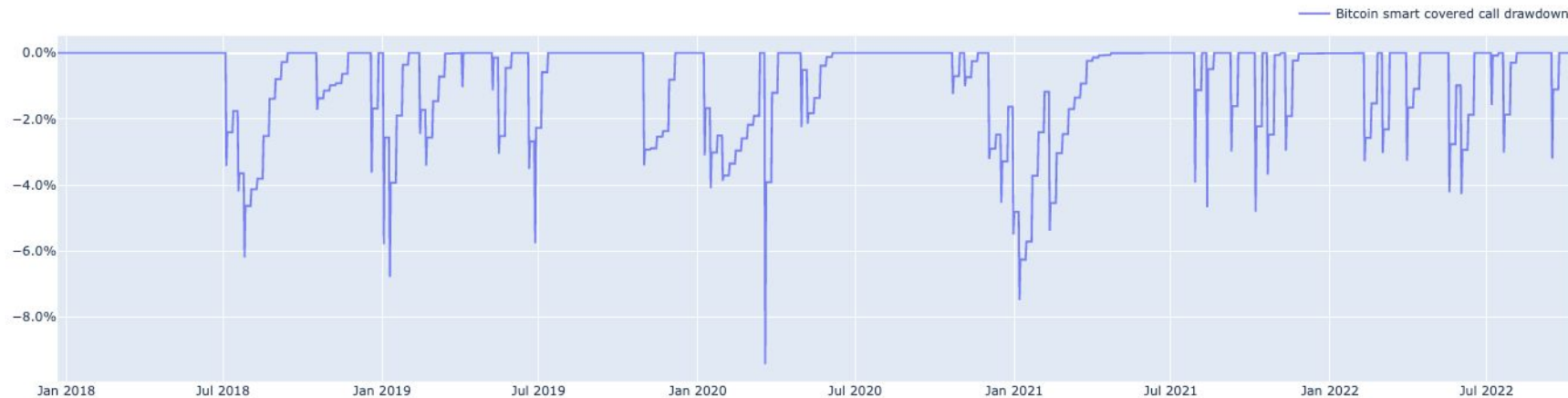
- Low frequency one : triggered by a liquidity need and the will not to sell your BTCs : you sell covered calls in the money with a long duration (> 6months) and you get an immediate huge premium (around 50% of notional) but you have sold the upside of your BTCs, but at least you keep them if the price is under K at expiry  
=> high yield structured products
- Middle frequency one : you roll call options on a weekly basis with a strike very unlikely to be hit (cumulated with a stop loss) and you compound the premium.

# Weekly rolling covered call strategy

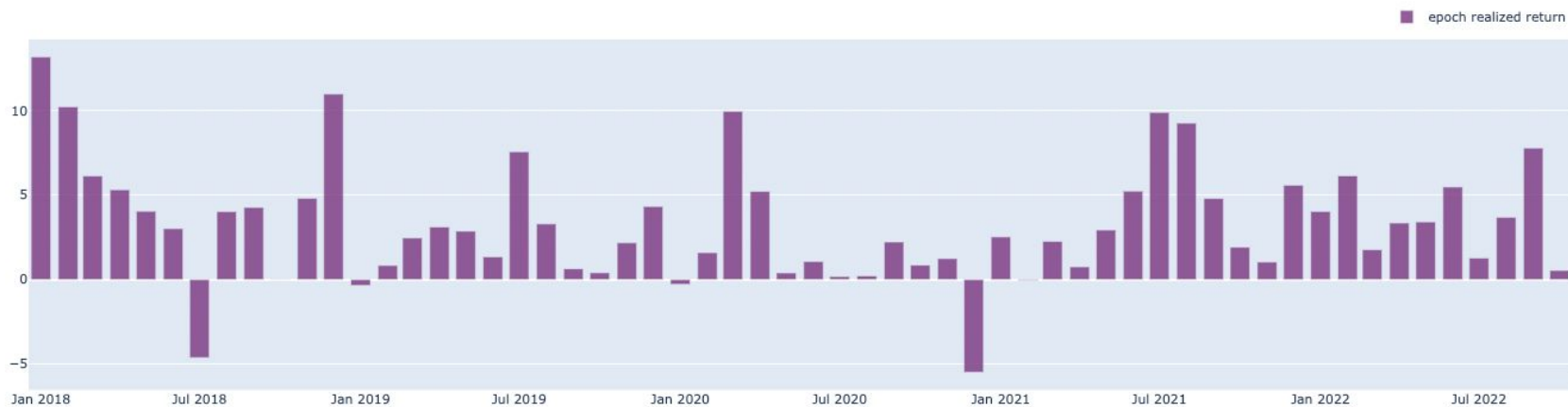
Strategy absolute performance



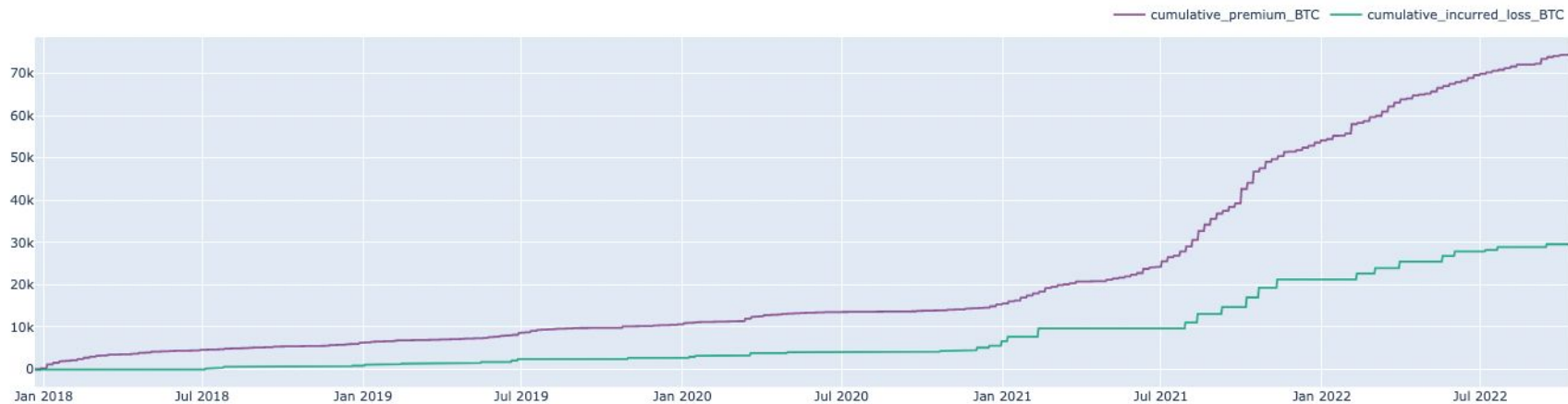
Drawdown chart



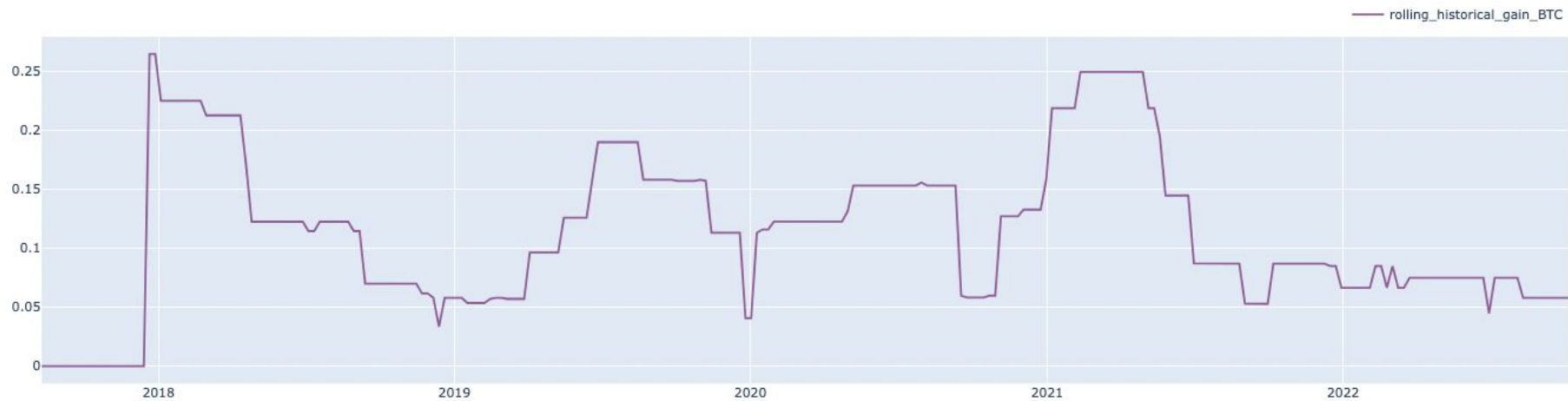
epoch realized return in percent (epoch frequency monthly)



cumulated gain vs losses \_BTC

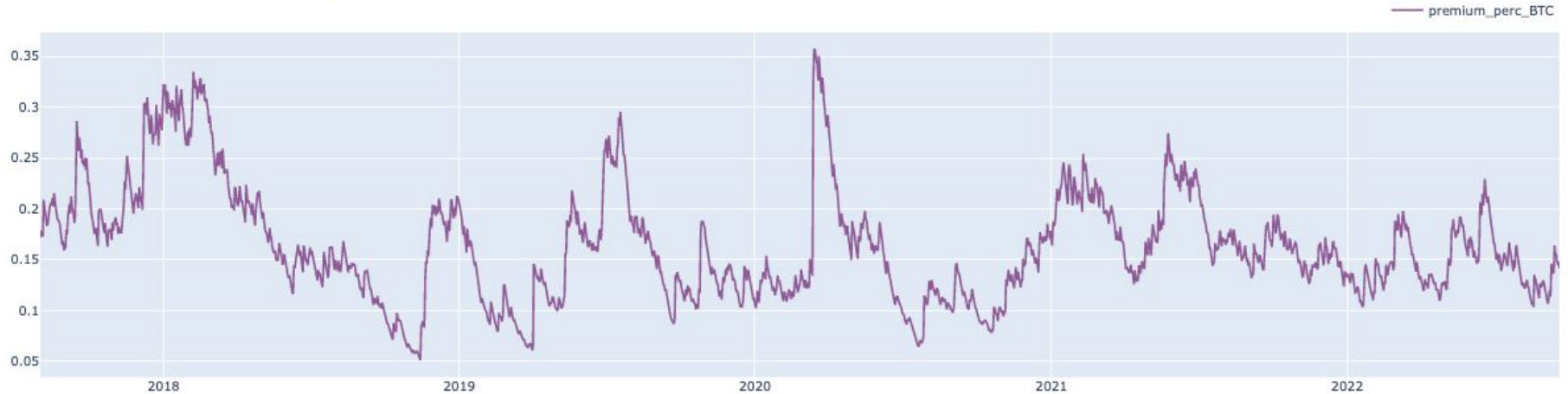


smart strike price from the spot in %

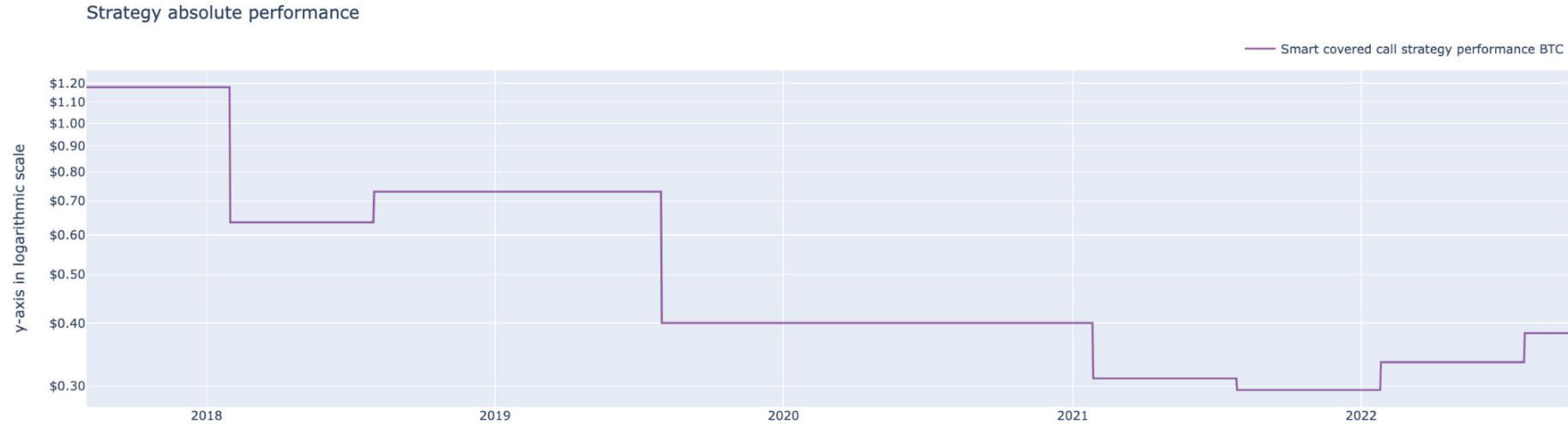


# Structured Products/low frequency : huge time to maturity : big premium

Premium as notional percentage over time at the money 6 months duration



# Systematic rolling covered call at the money 6 months: losing money





# Making sure you earn at least $R = 15\%$ on your BTC

- Compute the maturity  $T$  such that premium  $P(S_0, T)$  in the money (strike  $S_0$ ) is such  $S_0 + P(S_0, T) = S_0 \cdot (1 + R)$

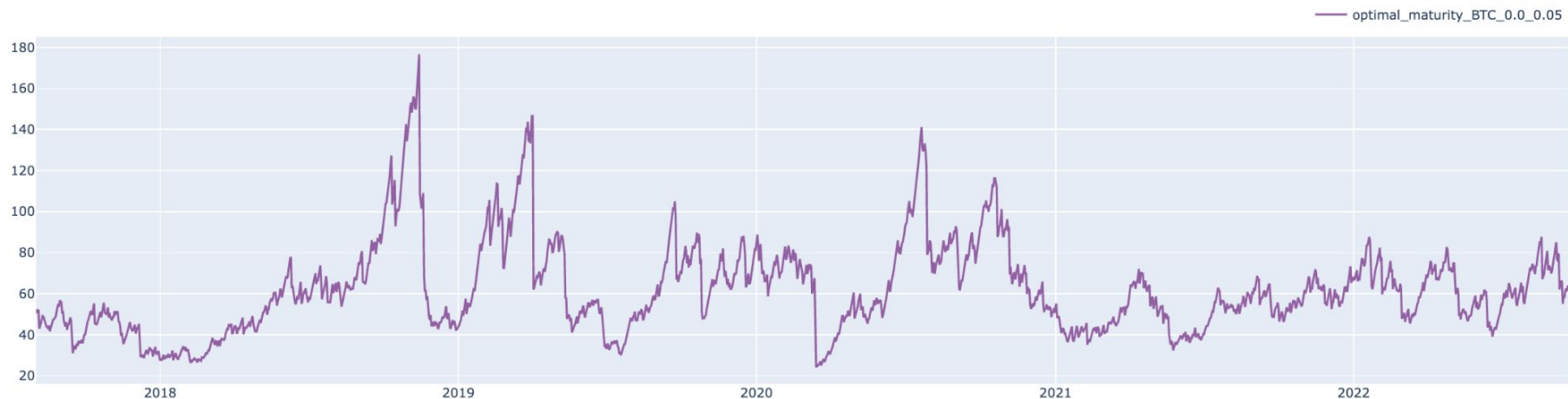
=> sell the call option at  $T_{\text{opt}}$  : you guarantee the yield but you cap your gain at  $S_0$

- We can adjust the strike price to allow a bullishness flavour :  $S_1 = S_0 \cdot (1 + B)$ ,  $B$  being the bullishness flavour.

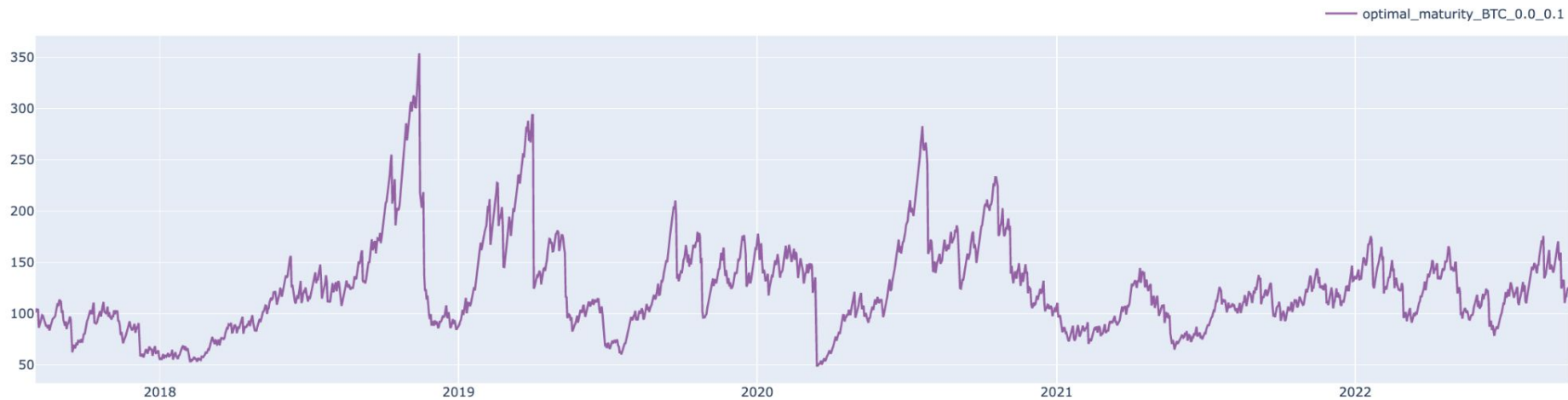
=> Compute the maturity  $T$  such that premium  $P(S_1, T)$  slightly above the money (strike  $S_1$ ) is such  $S_0 + P(S_1, T) = S_0 \cdot (1 + R)$

# Making sure you earn at least $R\%$ on your BTC (upside totally capped $B=0$ )

Optimal Maturity



Optimal Maturity



Optimal Maturity



# Making sure you earn at least R% on your BTC (upside capped at B=5%)



Optimal Maturity



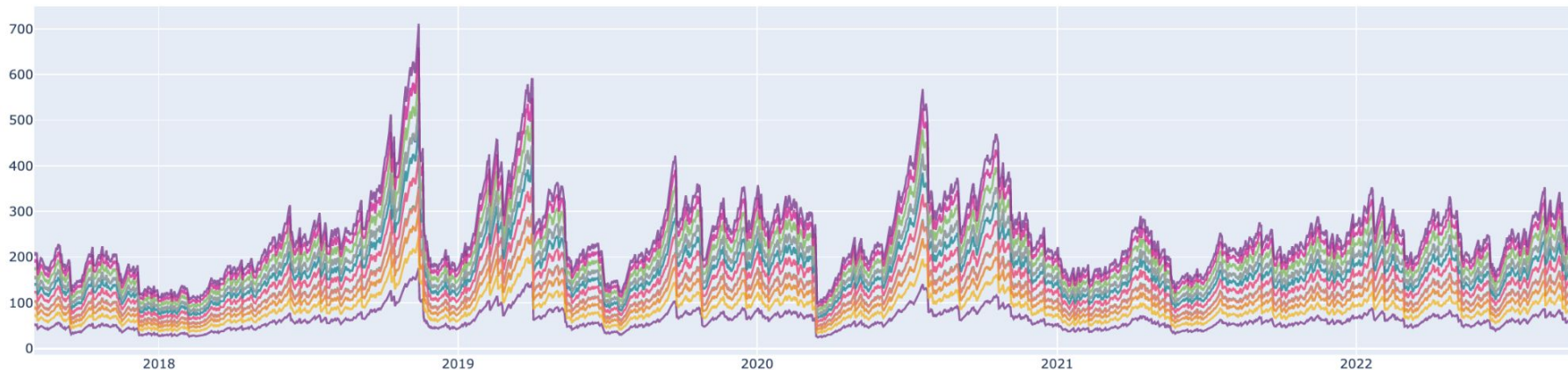
Optimal Maturity



# Optimal maturity

Optimal Maturity

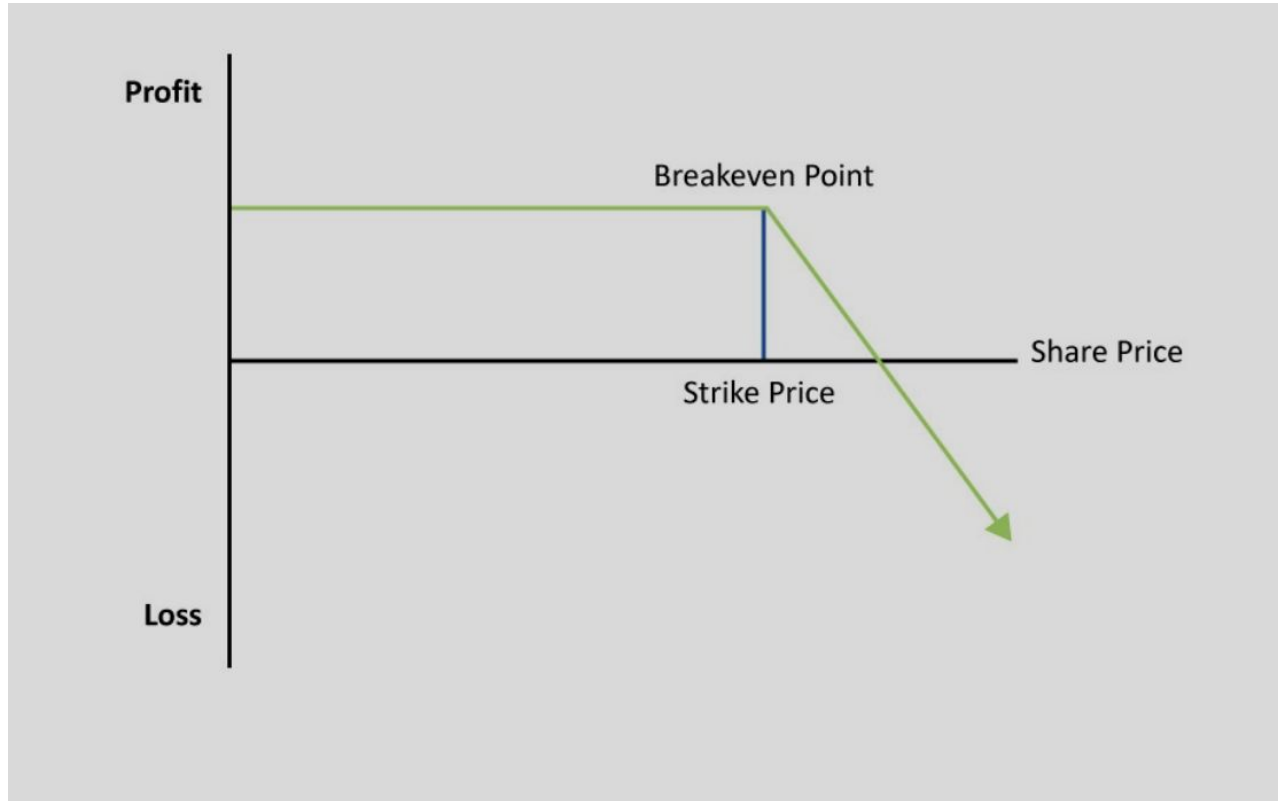
optimal\_maturity\_BTC\_0.0\_0.05   optimal\_maturity\_BTC\_0.0\_0.1   optimal\_maturity\_BTC\_0.0\_0.15   optimal\_maturity\_BTC\_0.05\_0.05   optimal\_maturity\_BTC\_0.05\_0.1  
optimal\_maturity\_BTC\_0.05\_0.15   optimal\_maturity\_BTC\_0.1\_0.05   optimal\_maturity\_BTC\_0.1\_0.1   optimal\_maturity\_BTC\_0.1\_0.15   optimal\_maturity\_BTC\_0.15\_0.05  
optimal\_maturity\_BTC\_0.15\_0.1   optimal\_maturity\_BTC\_0.15\_0.15



# Strategy

- Same study must be done but with market call prices for a more accurate backtest

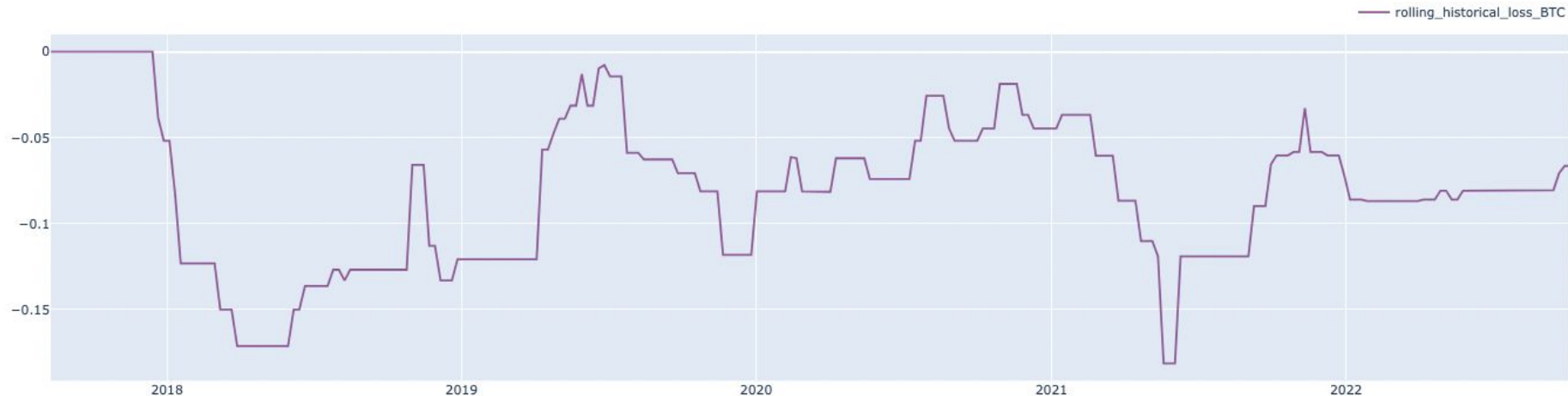
# Put selling





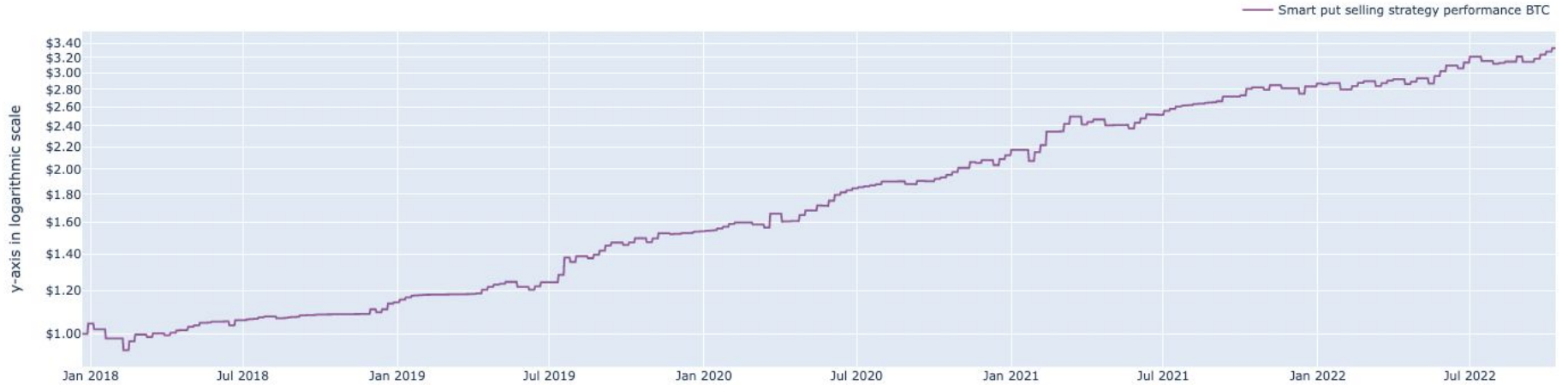
# Weekly rolling smart put selling

smart strike price from the spot in %



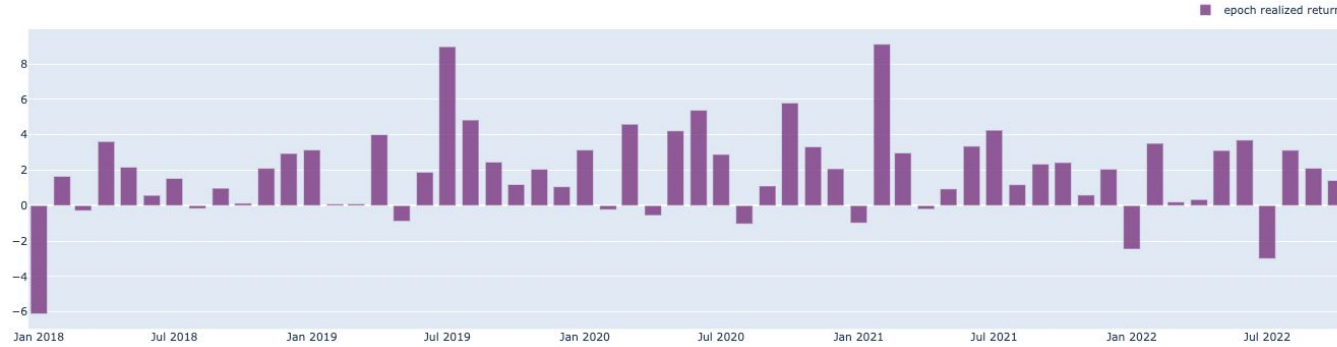
# Weekly rolling smart put selling

Strategy absolute performance

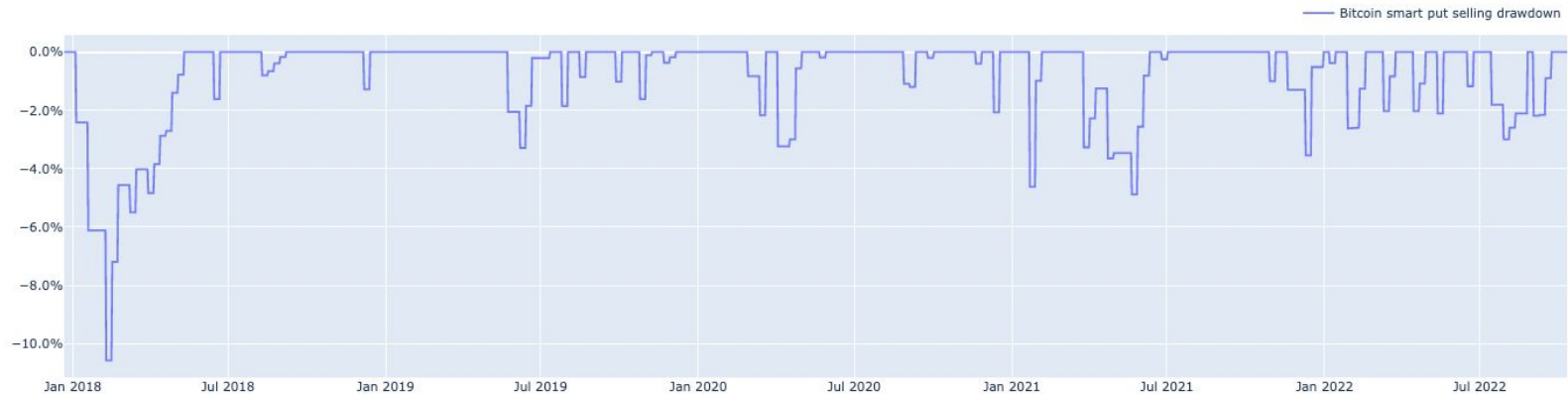


# Weekly rolling smart put selling

epoch realized return in percent (epoch frequency monthly)

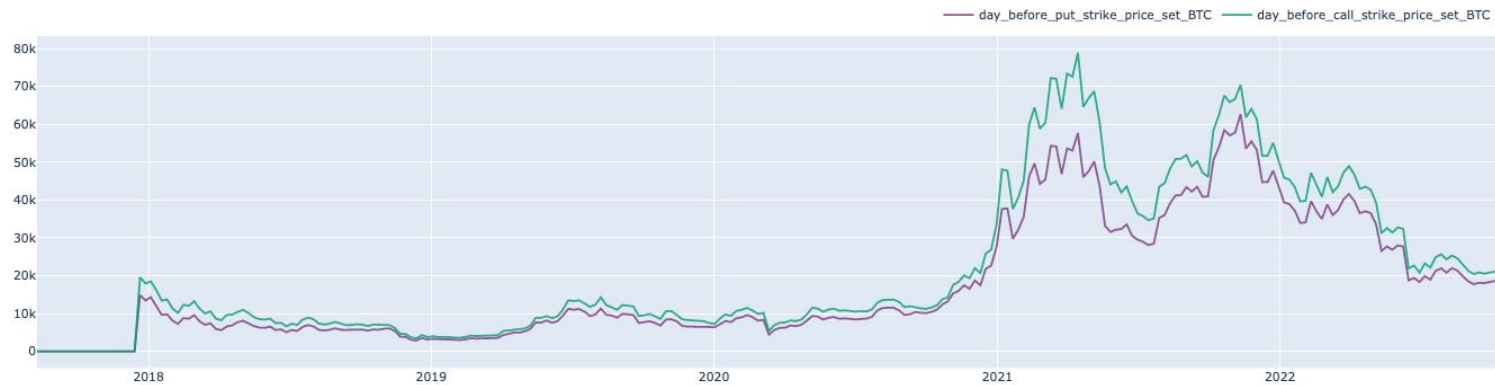


Drawdown chart



Mix covered call/put selling (strategy combo  $\frac{1}{2}$ - $\frac{1}{2}$ )

call/put strike price BTC



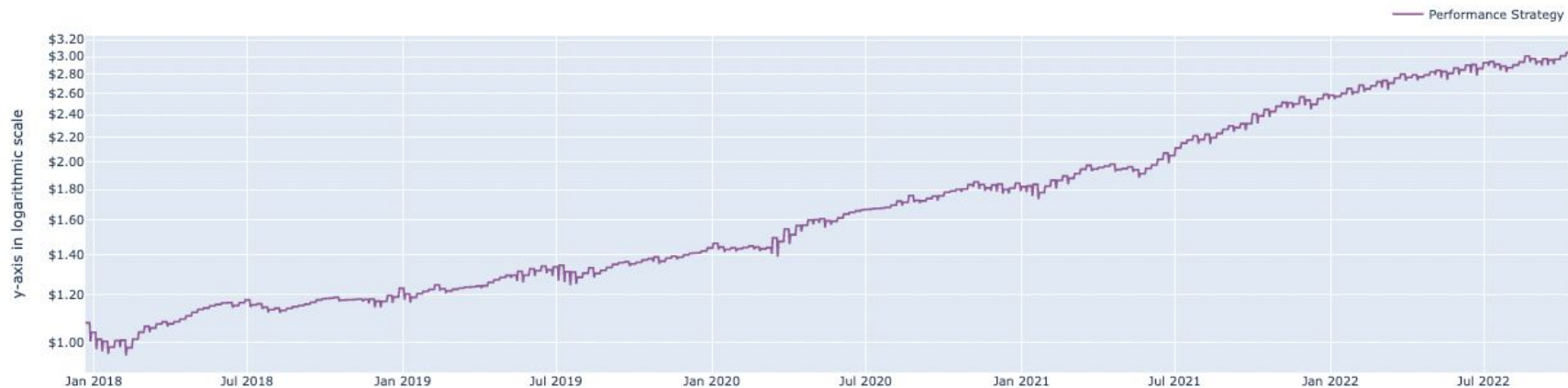
smart strike price from the spot in %



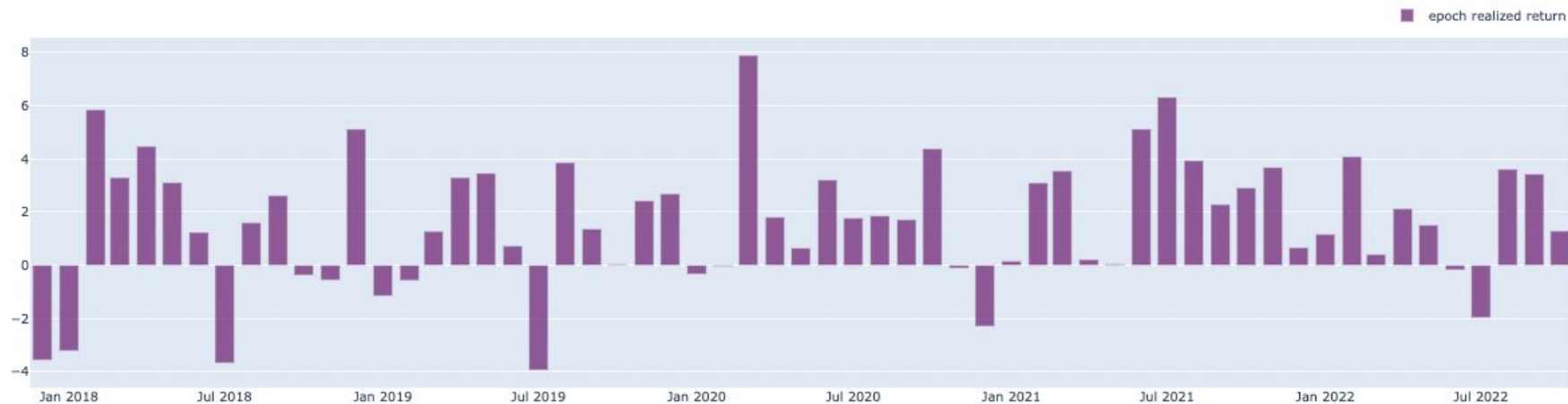
Drawdown chart



Strategy CALL\_PUT\_RANGY)



epoch realized return in percent



epoch realized max drawdown in percent

