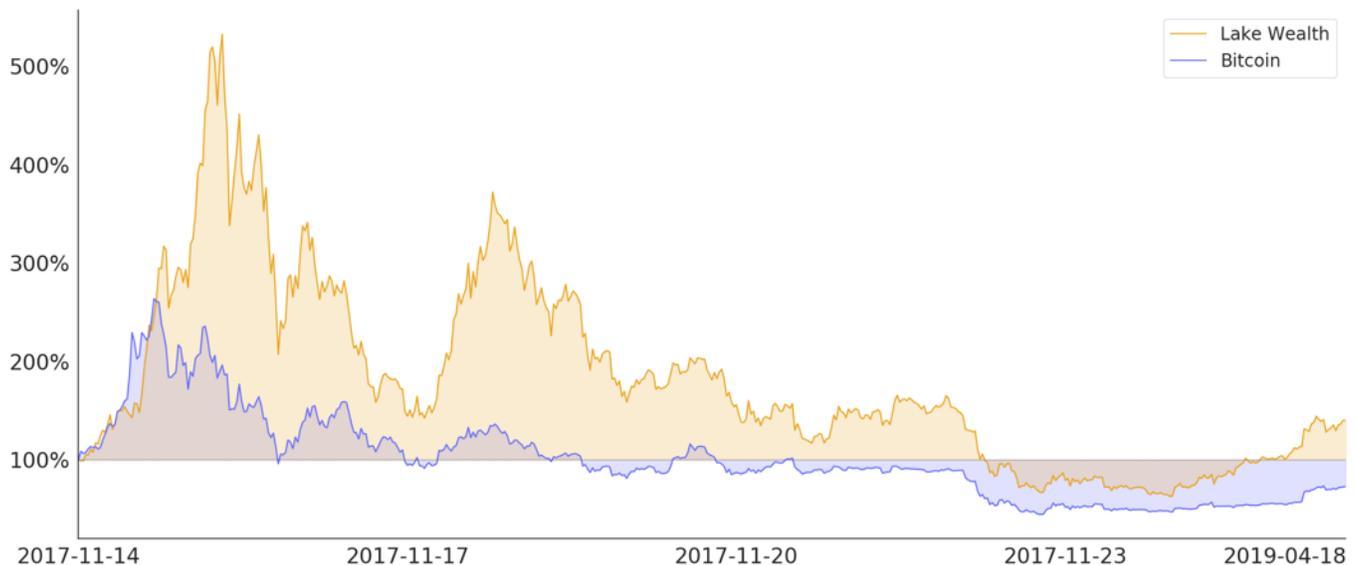# LW-11

Prepared on: April 25, 2019

A backtesting report over the last 1.5 years of an artificially generated portfolio of 9 assets selected every 45 days from the top 11 coins on Binance, presented as a prototypal "index fund" with a 1% rebalancing fee.

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Cumulative Returns

Performance of an index is not illustrative of any particular investment. Index performance in the table above prior to February 1, 2019 represents a hypothetical, backtested return that does not represent the returns of an actual account. Index performance includes a 1% rebalance penalty (composed of exchange fee, spread & slippage) of applied every 45 days and does not include the Lake fees and expenses that are charged. Backtesting is calculated by retroactively applying a financial model to historical data to obtain returns.

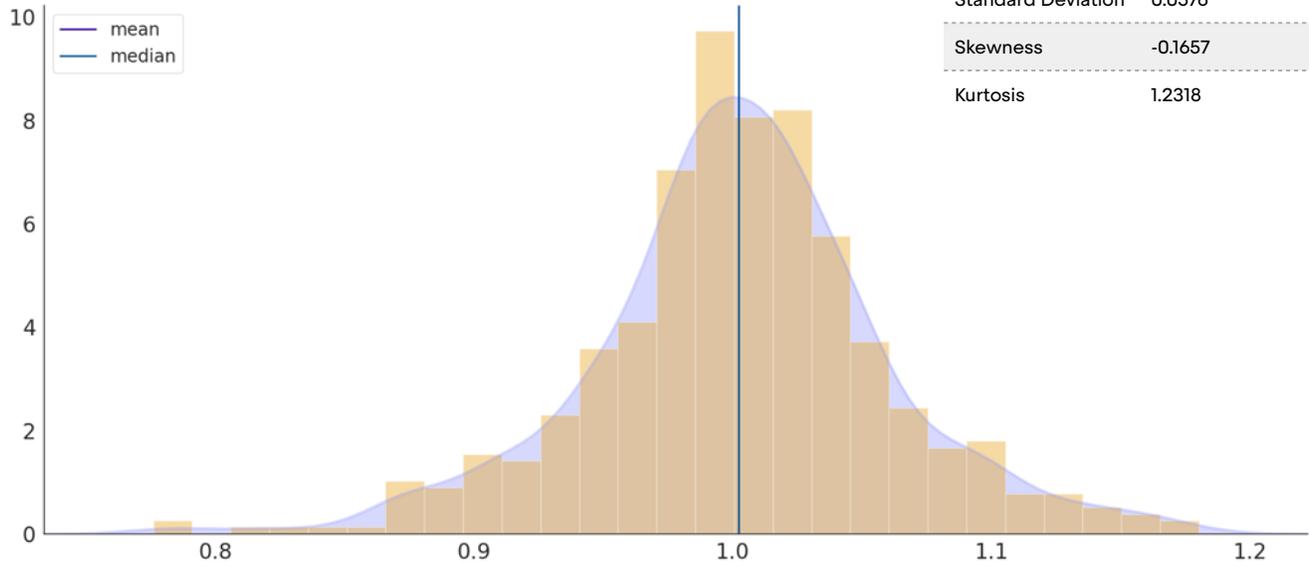| Dataset	Binance USDT (Utility)
Rebalancing Interval	45 Days
Estimated Sample Size	34
Rebalancing Fee	1%
Timeline	All Time
Asset Count	9 Assets
Period Start	2017-11-14
Period End	2019-04-18

Distribution of Daily Returns

Daily returns prior to February 1, 2019 represent a hypothetical, backtested return that does not represent the returns of an actual account.
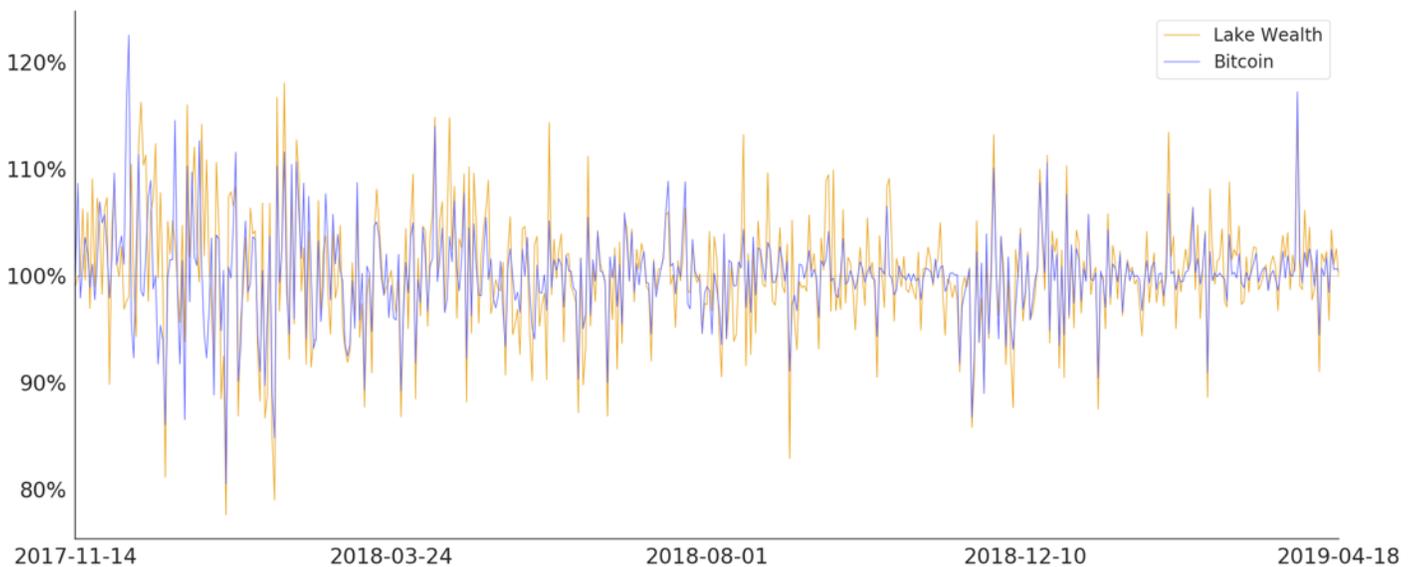
Histogram

SUMMARY STATISTICS

Mean Return	1.0023
Max Return	1.1804
Min Return	0.776
Medium	1.0024
Standard Deviation	0.0576
Skewness	-0.1657
Kurtosis	1.2318

Time Series

	Value at Risk	Estimated Shortfall		Max Drawdown	-4.7%
10%	-7.14%	-11.05%		Average Sharpe Ratio	1.22
5%	-9.24%	-12.75%		Average Beta	0.11
1%	-13.16%	-16.51%			

The portfolio has a 10% one-day VaR of 10.6%, representing a 10% chance that the portfolio will decrease 10.6% in one day. Conditional upon being in the VaR threshold, Estimated shortfall is the weighted average of all extreme losses.

Rolling Sharpe Ratio

The Sharpe ratio provides a measure of mean excess returns of a strategy as a ratio of the volatility endured to achieve those returns. It is a broad measure of the reward-to-risk ratio. The 30-day Rolling Sharpe Ratio simply calculates this value on the previous month's worth of trading data. It provides a continually-updated view of current reward-to-risk.
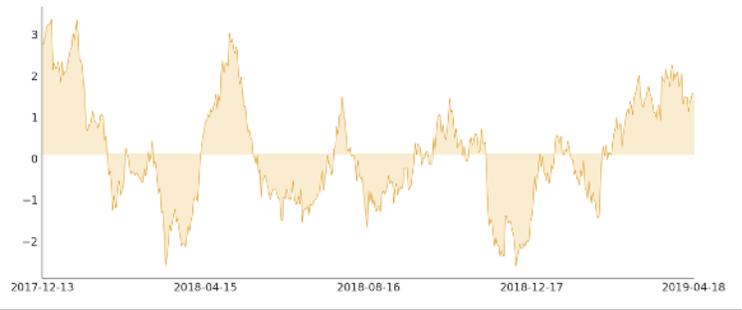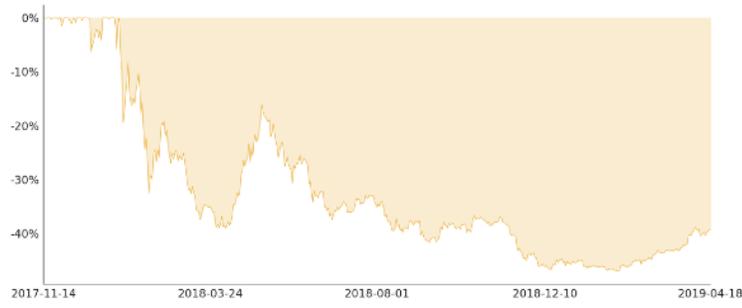

Rolling Beta

Beta is a measure of a stock's volatility in relation to the market. A stock that swings more than the market over time has a beta above 1.0. If a stock moves less than the market, the stock's beta is less than 1.0. High-beta stocks are supposed to be riskier but provide a potential for higher returns; low-beta stocks pose less risk but also lower returns. 30-Day Rolling Beta limits the number of historical periods considered to 30 days.
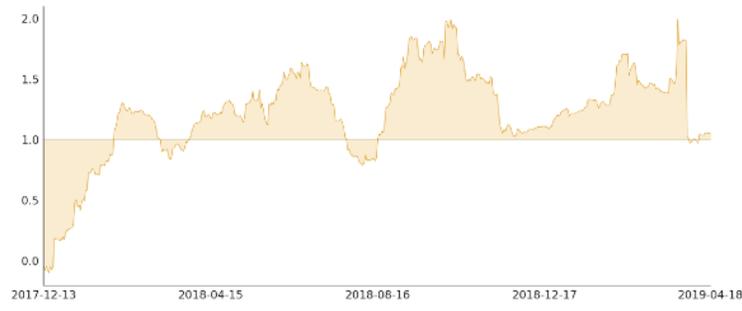
Drawdown

Drawdown is a measure of risk that describes the difference between an investment's peak performance over subsequent performance in percentage. Given an assets return has halved since its peak, its drawdown would be 50%. It gives investors a rough idea as to how long an equity would take to recover from the losses incurred following its peak.