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RESEARCH

**Vision Hill Crypto
Hedge Fund Returns:
Second Quarter 2019**

August 15, 2019



[Abstract]

This piece builds on [the work we started in Q2'18](#) and [the Vision Hill Active Crypto Indices we introduced in July 2019](#). The Vision Hill Active Crypto Indices are non-investable reference indices designed to be representative of the overall composition of the crypto and blockchain-focused hedge fund universe. The Vision Hill Active Crypto Index (VH-ACI) is a reference index designed to be representative of the overall performance of all actively managed crypto and blockchain-focused hedge funds within our scope. We currently segment all crypto hedge funds into one of three categories, namely: 1) Fundamental, 2) Quantitative, and 3) Opportunistic.

The VH-ACI (Composite) aggregates all these strategies into one index at the headline level. Sub-indices for each strategy are also available for anybody wishing to reference specific types of managers and strategies, notably the VH-ACIF, VH-ACIQ, and VH-ACIO for Fundamental, Quantitative, and Opportunistic hedge fund managers, respectively. Defining characteristics for each of these strategies, as well as more detailed information on the indices can be found in our [methodology](#) publicly available on our website.

According to Vision Hill Research, in the second quarter of 2019, the VH-ACI (Composite) was up +53.6%, the VH-ACIF (Fundamental managers) was up +62.8%, the VH-ACIQ (Quantitative managers) was up +39.7%, and the VH-ACIO (Opportunistic managers) was up +48.2%. For YTD 2019 (through June 30, 2019), the VH-ACI (Composite) was up +66.9%, the VH-ACIF (Fundamental managers) was up +81.6%, the VH-ACIQ (Quantitative managers) was up +45.0%, and the VH-ACIO (Opportunistic managers) was up +65.2%.

It is worth noting that approximately 50 unique data points were used for the Q2 analysis across the three aforementioned strategies (Fundamental, Quantitative and Opportunistic). It should also be noted that several crypto hedge funds voluntarily elected not to report their performance to us this quarter, and others did not yet have their finalized performance for second quarter 2019 available in time for this analysis. As we discuss in our [methodology](#), we take benchmarking biases such as self-reporting bias, survivorship bias and backfill bias very seriously as it pertains to these quarterly studies, and continue to manage such biases appropriately going forward.

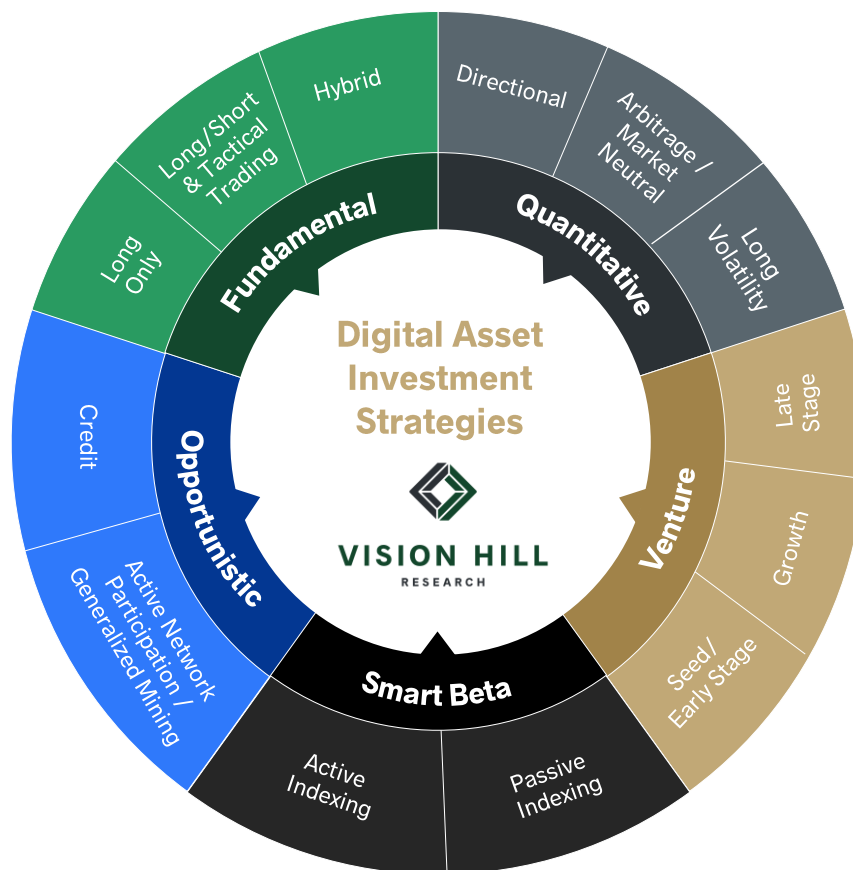
As with prior quarters, we will continue to provide these reference points on a quarterly basis going forward segmented by fund strategy as well as fund type. *It should be noted that these performance metrics are quarterly metrics as of a particular point in time (April 1, 2019 through June 30, 2019), that represents only a limited snapshot and should not be considered as long-term indications of performance. This analysis should only be used as of this point in time as a framework. The digital asset class remains highly volatile and in the early stages of development, and past performance is no guarantee of future results.* We also continue to relay a call to action to the community to help us work on improving this benchmarking initiative so that it may one day become more widely adopted by fund managers and institutional investors. For a quick recap of what attributes we believe a good benchmark should possess, as well as what challenges we are aware may arise over time in regard to benchmarking in this nascent asset class, we encourage you to review the [original publication](#). Let's dig in.





Investment Strategies

An infographic of what we believe to be the most popular investment strategies in the digital asset industry at present is illustrated below. For purposes of the Vision Hill Active Crypto Indices, we segment active hedge fund strategies into Fundamental, Quantitative and Opportunistic.



Fundamental

Long Only – these are managers that employ extensive, deep value research and experiment with quantitative and qualitative metrics to determine what digital assets have the potential to accrue large amounts of value over time. These managers find assets they have high conviction in, and buy and hold those assets for a certain period of time. This is popular in both liquid and illiquid strategies (e.g., both public and private markets). We have begun to see some development around a [stack element focus](#) (e.g., base-layer focus, layer 2 solution focus, middleware focus and/or application layer & UI/UX focus), but generally speaking still find most of these managers to invest across the entire ecosystem stacks at present.

Long/Short & Tactical Trading– these managers similarly undergo extensive research in the space, but instead of only buying and holding assets they believe will accrue value, they also short-sell and tactically trade assets that they believe are expected to decrease in value as a result of internal signals, sophisticated factor-based models and expected catalyst events. This is more popular in the public (liquid) crypto markets.

Hybrids – in certain cases, managers possess a hybrid strategy where they are investing in high conviction projects in both liquid and illiquid (public and private) crypto markets. Some managers choose to only be long in both markets, while others choose to actively short-sell and tactically trade where they are able to.



Quantitative

Directional – these are managers that run highly sophisticated quantitative models that produce either “risk-on” or “risk-off” trading signals that direct these managers to execute their discretionary investment strategies in an aggressive or passive way depending on the perceived market cycle. Momentum, sentiment, trend and some systematic algorithmic trading strategies also tend to be popular here. This strategy can be focused on a single digital asset, a basket of digital assets, or relative value trading between assets, but is largely reliant on a quantitative model.

Arbitrage / Market Neutral – these are managers that utilize strategies that remove or limit market risk while capturing alpha returns. Exchange arbitrage strategies capitalize on the price discrepancies between different exchanges geographically or on pair trades within the same exchange, while managed futures, developing derivative strategies, or HFT seek returns with minimized market risk. Systematic algorithmic trading strategies also tend to be popular here.

Long Volatility – We are seeing this as a developing quantitative strategy whereby managers focus on the Greeks, including Delta, Theta, Rho, Gamma and Vega to manage risk from the perspective of volatility. These managers typically enter into option positions that are long volatility whereby if volatility increases, the manager would be expected to outperform.

Opportunistic

Credit – these are managers that are leveraging the traditional lending business model and applying it to this new asset class. Such managers purchase loans backed by digital asset collateral and earn interest/yields on these cash loans. This has been growing in popularity lately as many holders of digital assets want liquidity but do not want to monetize their positions to trigger taxable events or give up the potential upside they believe these digital assets can achieve in the future.

Active Network Participation / Generalized Mining – We have continued to see this strategy develop since our last publication. We acknowledge crypto-networks provide financial incentives whereby a community is catalyzed to pull together and provision a decentralized digital good or service, self-organize in a specific way and then remunerate for either the contribution of that resource or pay for a specific resource on a network. Thus, this strategy entails crypto-network investors providing more resources than just capital, governance and operational partnerships – we are seeing such investors also engage in mining, staking, validation, bonding, curation, dispute resolution, node operation, network routing, and more to help shape the direction of networks they are invested in. Some examples (not all-inclusive) of crypto-networks in which these strategies are being executed are:

Common Active Network Participation	
Incentive Action	Description
Mining	Miners receive block rewards (typically new coins and transaction fees) when they solve the complex mathematical problems required to process transactions in the digital currency system for proof-of-work protocols. In many cases, we are seeing investment flows that are used to purchase the necessary infrastructure, equipment and warehouses to run large-scale mining operations. Bitcoin is the most well-known proof-of-work protocol.
Staking	Similar to mining, but with proof-of-stake protocols. The transaction confirmations are not done with hardware but with already owned digital assets (generally via bonding). We are seeing investment flows that are used to purchase digital assets for staking purposes where stakers earn a percentage (a yield) of their coins as a reward for validating transactions in a crypto-network that relies on proof-of-stake. Ethereum is currently in the process of transitioning to proof-of-stake.



Other Examples of Active Network Participation / Generalized Mining (Not All Inclusive)		
Network Name	Incentive Action	Description
Cosmos	Validators	Cosmos is a decentralized network of independent parallel blockchains, each powered by classical byzantine fault tolerant consensus algorithms. The first blockchain in the Cosmos Network is the Cosmos Hub, whose native token is the Atom. Validators commit new blocks in the blockchain and receive revenue in exchange for their work.
EOS	Block Producers	EOS is a decentralized operating system based on blockchain technology. It is designed to support decentralized applications on a commercial-scale by giving all the required core functionalities. Block Producers are the elected governors of the EOS network.
Livepeer	Merkleminers Orchestrators Transcoders	Livepeer is a decentralized video transcoding network. Suppliers to the network stake their LPT tokens for the right to provide video transcoding and content delivery services to Livepeer customers. Orchestrators may elect to run several concurrent instances of a node for disaster recovery, redundancy, load balancing, and geo routing. Transcoders take already-compressed (or encoded) video content; decompress (decoding) it; and then alter and recompress it. Vision Hill published a Livepeer Case Study that is publicly available.
Maker	Keepers	Maker is comprised of a stablecoin, collateral loans, and decentralized governance. As the supply and demand curves for Dai do not intersect in the MakerDAO system, when demand for Dai increases, there is no organic reason why CDP-creators will create more Dai. Thus, Keepers are entities that help maintain the Dai peg by bidding on collateral being liquidated from insolvent CDPs. Vision Hill published a MakerDAO Case Study that is publicly available.
Ocean Protocol	Ocean Keeper	Ocean Protocol is a network facilitating the peer to peer exchange of data and services (storage, compute and algorithms for consumption) aiming to open up the silos of unused data the mainstream operates with today. The Ocean Keeper is a set of bots gathering Github activity data and enriching it within the Ocean Protocol network.
Polkadot	Validators Collators Fishermen	The Polkadot protocol is intended to be a scalable heterogeneous multi-chain technology. Validators verify and finalize parachain candidates into blocks and receive token rewards. Collators gather parachain transactions into Proof of Validity block candidates and receive transaction fees. Fishermen monitor, or “fish” in the network for any misbehavior and receive a proportion of the staked bond of any bad actors.
Steemit	Curation Bots	Steem is a social blockchain that grows communities and makes immediate revenue streams possible for users by rewarding them for sharing content. Curation bots are identifying users who have made big payout posts in the past, and taking into consideration factors like the number of words, headers, pictures, and links to determine how to allocate upvotes in order to earn more Steem power.
Tezos	Bakers	Tezos is a blockchain that can evolve by upgrading itself. Stakeholders vote on amendments to the protocol, including amendments to the voting procedure itself, to reach social consensus on proposals. Tezos supports smart contracts and offers a platform to build decentralized applications. “Baking” is the act of signing and publishing blocks to the Tezos blockchain and bakers are rewarded with additional tez for securing the network.

Venture

Typically, in the private markets, we see a bifurcation between private token strategies and private equity strategies. On the private token side, we see managers investing in projects undergoing private presales, follow-on sales, and the like, whereas on the private equity side, managers are focusing on business models that do not warrant a token and instead invest in these businesses as you would in traditional venture equity. We typically see three sub-strategies here, but for the purposes of our framework, we refer to this strategy as simply venture.



Seed/Early Stage – these are investors that finance the very early development of new products or services. Typically, we see simple agreements for future tokens (“SAFTs”), simple agreements for future equity (“SAFEs”), pre-sales, and early stage private sales (typically Series A) as the investment structures in this strategy.

Growth – these are investors that finance expansion and help projects position for critical mass. Typically, we see private sales (typically Series B, Series C, etc.) as the investment structures in this strategy. On the token side, we see larger private accredited investor rounds to increase distribution and participation.

Late Stage – these are investors that finance positions that are in the works of positioning themselves for public offerings. The projects can demonstrate significant growth but may or may not be showing value accretion. Projects have usually been in existence for more than three years. Typically, we see later-stage private sales (Series D, and onward) as the investment structures in this strategy. On the token side, this might take the form of a public token sale, launch of the network, airdrop, or public listing of tokens on an exchange.

Smart Beta

Active Indexing – these are managers that index to a certain benchmark but are overweighting or underweighting certain selected digital assets actively in an effort to outperform the benchmark.

Passive Indexing – these are managers that create a market-weighted index or portfolio in an effort to offer a diversified, low turnover, low cost alternative (e.g., basket funds and the like) to actively managed fund strategies. Usually there is a “smart” element to its genesis structural composition before it becomes fully passive.

The Vision Hill Active Crypto Indices

Presented below (where sufficient data was available), are what we believe are comparison points (average performance) of like-kind managers for historical quarterly periods dating back to Q1 2018. For confidentiality purposes, we are unable to disclose any specific performance numbers or specific manager names; we only present measures of central tendency and generalized brackets of performance to protect manager privacy. We also elected to solely present data for the full three months leading up to each period. Returns below are net of all management & performance fees to the best of our knowledge.

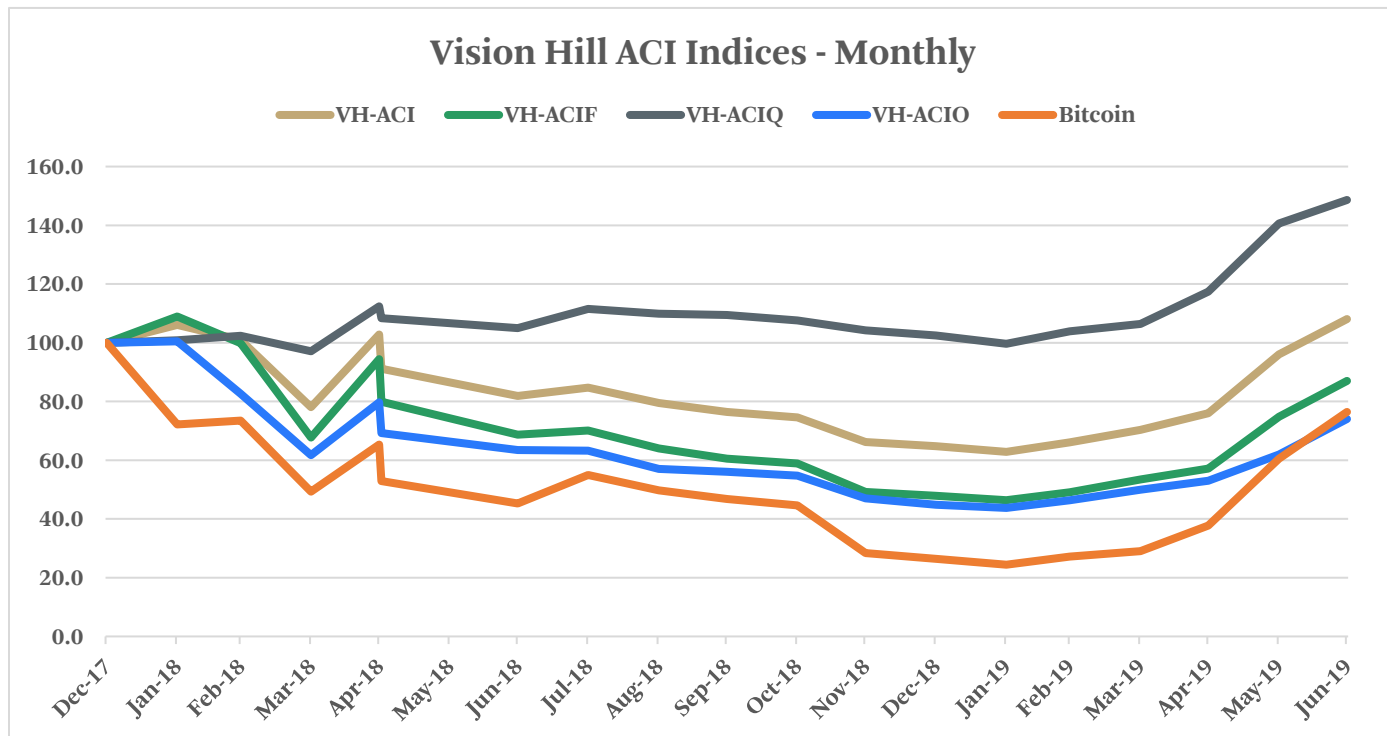
Historical Performance	VH-ACI	VH-ACIF	VH-ACIQ	VH-ACIO
2019 YTD	66.9%	81.6%	45.0%	65.2%
Q1 2019	8.7%	11.6%	3.8%	11.4%
Q2 2019	53.6%	62.8%	39.7%	48.2%
2018 FY	-35.3%	-52.1%	2.5%	-55.2%
Q1 2018	-21.9%	-32.3%	-2.9%	-38.2%
Q2 2018	4.8%	1.6%	8.1%	2.7%
Q3 2018	-6.6%	-11.9%	4.3%	-11.6%
Q4 2018	-15.4%	-20.9%	-6.3%	-20.0%

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Putting these active management returns in context relative to some passive, public counterparts, bitcoin (BTC) was up +163.5% on the quarter and +189.0% for YTD 2019, the Bitwise 10 Large Cap Crypto Index (BITX) was up +137.2% on the quarter and +162.4% for YTD 2019, and the Bloomberg Galaxy Crypto Index (BGCI) was up +110.1% on the quarter and +126.9% for YTD 2019. However, despite bitcoin's recent parabolic upward performance in the second quarter of 2019, when considering active management performance from a longer lens (such as the beginning of 2018, representing 18-months of observed performance), active managers consistently outperformed passively holding bitcoin (with the exception of Opportunistic managers as of May 2019).



In consideration of the foregoing, is important to emphasize that these performance comparisons are metrics as of a particular measurement point in time, representing only a limited snapshot and should not be considered as long-term indications of performance. We believe the crypto hedge fund landscape was not fully developed enough to warrant meaningful performance and statistical analysis until the beginning of 2018, and even that measurement period is limited to 18-months as of the time of writing. The digital asset industry remains highly volatile and in the early stages of development, and past performance is no guarantee of future results. Additionally, strategy specialization, alpha generation, risk management, valuation, and operational best practices continue to develop in the crypto hedge fund landscape.

As noted previously, we seek to provide points of reference for measuring performance among similar investment strategies, and we plan to deliver these performance statistics on a quarterly basis going forward. We are targeting mid-November 2019 for our release of the September 30, 2019 third quarter fund performance. We hope each quarterly publication continues to include more unique data points with the helpful collaborative efforts of all crypto fund managers.

Vision Hill Strategy Quartiles

Presented on the following page are strategy quartiles for Fundamental, Quantitative and Opportunistic managers dating back to Q2 2018 when we first began this analysis.



2019				
	Q1	Q2	Q3	Q4
Fundamental (Median)	9.6%	48.3%		
1 st Quartile	15.6% < X	79.8% < X		
2 nd Quartile	9.7% < X < 15.5%	48.4% < X < 79.7%		
3 rd Quartile	2.2% < X < 9.6%	27.6% < X < 48.3%		
4 th Quartile	X < 2.1%	X < 27.5%		
Quantitative (Median)	1.6%	26.2%		
1 st Quartile	7.2% < X	59.4% < X		
2 nd Quartile	1.7% < X < 7.1%	26.3% < X < 59.3%		
3 rd Quartile	-0.9% < X < 1.6%	8.8% < X < 26.2%		
4 th Quartile	X < -1.0%	X < 8.7%		
Opportunistic (Median)	3.5%	49.3%		
1 st Quartile	15.5% < X	55.1% < X		
2 nd Quartile	3.6% < X < 15.4%	49.4% < X < 55.0%		
3 rd Quartile	1.8% < X < 3,5%	22.2% < X < 49.3%		
4 th Quartile	X < 1.7%	X < 22.1%		

2018				
	Q1	Q2	Q3	Q4
Fundamental (Median)	n/a	-5.1%	-14.5%	-25.6%
1 st Quartile	n/a	1.0% < X	-3.2% < X	-11.7% < X
2 nd Quartile	n/a	-5.0% < X < 0.9%	-14.4% < X < -3.3%	-25.5% < X < -11.8%
3 rd Quartile	n/a	-12.5% < X < -5.1%	-22.3% < X < -14.5%	-36.3% < X < -25.6%
4 th Quartile	n/a	X < -12.6%	X < -22.4%	X < -36.4%
Quantitative (Median)	n/a	-3.1%	2.5%	-2.9%
1 st Quartile	n/a	-1.7% < X	8.2% < X	1.0% < X
2 nd Quartile	n/a	-3.0% < X < -1.8%	2.6% < X < 8.1%	-2.8% < X < 0.9%
3 rd Quartile	n/a	-5.0% < X < -3.1%	0.3% < X < 2.5%	-13.2% < X < -2.9%
4 th Quartile	n/a	X < -5.1%	X < 0.2%	X < -13.3%
Opportunistic (Median)	n/a	n/a	-7.8%	-24.6%
1 st Quartile	n/a	n/a	-4.0% < x	0.0% < x
2 nd Quartile	n/a	n/a	-7.7% < X < -4.1%	-24.5% < X < -0.1%
3 rd Quartile	n/a	n/a	-13.0% < X < -7.8%	-26.6% < X < -24.6%
4 th Quartile	n/a	n/a	X < -13.1%	X < -26.7%



Aggregated Risk Metrics (As of January 1, 2019)

Presented below are aggregated median risk metrics (calculated on a per-fund basis) as of January 1, 2019 unless otherwise specified.

	2019			
	Q1	Q2	Q3	Q4
Sharpe Ratio - Median	1.0	5.2		
Sortino Ratio - Median	-0.8	7.2		
Calmar Ratio - Median	0.2	6.0		
Sterling Ratio - Median	0.5	4.0		
Treynor Ratio - Median	0.0	0.0		
Information Ratio - Median	0.9	9.3		
Volatility - Median	3.6%	11.1%		
Upside Volatility - Median	10.7%	33.8%		
Downside Volatility - Median	2.9%	5.6%		
Upside to Downside Volatility Ratio - Median	3.6x	6.1x		
Z-Score – Median (Current Quarter)	0.4	2.3		
Percentile – Median (Current Quarter)	76.3%	89.8%		
Kurtosis - Median	n/a	0.5		
Skewness - Median	-0.8	0.5		

A Call To Action – Help Us Build a Better Benchmark

It should be noted that we do realize these benchmark comparison points are imperfect for a variety of reasons, hence we originally proposed this as a framework at best. First, the number of unique data points we have used in this exercise (approximately 50 as of second quarter 2019) continues to be relatively limited. While typically statistically significant sample sizes warrant a minimum of 30 variables, it is nonetheless our goal to continue to work with the community to collect more data over time so that future quarterly releases can grow more robust in size and fund managers can start comparing performance against reliable data points of like-kind managers and strategies. Thus, if you are a crypto fund that has not connected with us yet, are reading this, and want to contribute to helping us, please add us to your monthly and/or quarterly performance distribution list. We have set up tracking@visionhill.com for this very purpose and will look to automate this over time. Moving forward, we will look to develop a transparent opt-in system of reporting and ranking guided by community consensus and traditional market best practices.

Disclaimers

The Vision Hill Active Crypto Indices are non-investable reference indices designed to be representative of the overall composition of the crypto hedge fund universe. Performance of an index is not illustrative of any particular investment. It is not possible to invest directly in an index. Performance information for the indices is provided for informational purposes only. It is our intent for the Vision Hill Active Crypto Indices to become the market standard benchmark for all actively managed crypto and blockchain-focused hedge funds, institutional allocators, and sophisticated investors for the purpose of providing proper composite and sub-strategy relative benchmarking. The reference indices presented here are for illustrative and



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