PitchBook

Gaining exposure to emerging crypto assets

Analysis of current funds & strategies within crypto assets

Credits & Contact

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Contents

Introduction	1
Crypto Hedge Funds	2-3
Venture Capital Funds	4-5
ICO Funds	6-7
The Big Picture	7

Key Takeaways

- Institutional investors are enjoying increasing access to crypto assets through hedge funds and similar vehicles; however, larger crypto funds are often limited to holding concentrated positions of bitcoin and ETH due to liquidity constraints.
- Recent research suggests that investors generally remain under-allocated to crypto assets on a risk-adjusted basis; from August 2010 to October 2017, bitcoin outperformed US large-cap equities 298% to 14.5% on an annualized basis while producing a comparable Sharpe ratio.
- Passive vehicles offering exposure to crypto assets carry significantly higher fees than public market passive ETFs and mutual funds, as crypto managers leverage the lack of competition and outsized historical returns from cryptos to justify the higher fee load.
- While VC investors funded much of the early application-layer infrastructure, the emergence of new types of vehicles and investment styles, such as ICO funds and crypto hedge funds, has forced them to adapt. Newly minted crypto millionaires have been increasingly able to bootstrap their own projects as well as tap into non-dilutive financing via token sales.

Introduction

This analyst note provides an overview of the various fund types and strategies employed by institutional investors in emerging crypto assets, which provide a differentiated liquidity and return profile compared to other early stage investments. The goal is to outline the emerging—and sometimes overlapping—methods of gaining exposure to the space.

Crypto Hedge Funds

Contrary to other types of alternative investments, crypto assets are more accessible to retail traders compared to institutional investors because cryptos' small market caps and thin trading volumes make it difficult to efficiently build sizable positions. Barriers remain high for traditional hedge funds to begin trading bitcoin, ETH and other crypto assets, but they are beginning to fall. An increasing number of exchanges have begun offering custodian services compatible with asset managers' regulations. The CME and CBOE began listing bitcoin futures in December, while the NASDAQ has announced that it will list futures linked to crypto assets in 1Q 2018. However, these vehicles are cash settled and therefore merely represent side bets on the price listed on a group of exchanges.

To that end, the thinly veiled secret of investing in crypto assets at scale is that it is extremely difficult to actively deploy more than around $100 million without concentrated positions in bitcoin and ETH. Some funds don't shy away from acknowledging the difficult realities; their justification for charging "2 and 20" fees is that the influx of retail money into the most popular crypto assets creates persistent exploitable opportunities for seasoned traders to generate alpha.

Furthermore, research[1] from Jim Kyung-Soo Liew of Johns Hopkins and Levar Hewlett of the Maryland State Retirement and Pension System found that the historical returns generated by bitcoin from August 2010 to October 2017 adequately compensated investors for the high degree of volatility, quantified by bitcoin outperforming US large-cap equities 298% to 14.5% on an annualized basis while simultaneously boasting a similar Sharpe ratio. It is worth noting, however, that the analysis is less than perfect; bitcoin's rampant increase throughout 2017 helps to inflate the Sharpe ratio because its volatility has been falling during its incessant run-up. Furthermore, the paper uses a risk-free rate of just 1%, which arguably is too low. The paper recommended that institutional investors increase their crypto asset allocation to realize these uncorrelated returns.

1: Liew, Jim Kyung-Soo and Hewlett, Levar, The Case for Bitcoin for Institutional Investors: Bubble Investing or Fundamentally Sound? (December 5, 2017). Available at SSRN: https://ssrn.com/abstract=3082808

Crypto startups with most VC backing

FIRM NAME	CAPITAL RAISED ($M)
Coinbase	$250.60
R3	$150.00
Circle Internet Financial	$136.00
Hive Blockchain (HIVE)	$133.66
Earn.com	$116.05
DH	$109.21
Digital Asset	$107.20
Ripple	$93.50
BitFury Group	$90.00
Blockstream	$77.28
CryptoCurrency	$73.00
Blockchain	$70.50
Algebraix Data	$66.48
BitPay	$62.80
BitGo	$56.50
PokitDok	$50.39
Chain	$43.90
Canaan Creative	$43.56
Xapo	$40.03
SETL	$39.46

Source: PitchBook
*Data as of 2006 to 12/31/2017

However, how to best access crypto assets remains an outstanding question. According to the new HFR Cryptocurrency Index produced by industry research firm Hedge Fund Research, hedge funds that invest in crypto assets returned 16.4x net of fees YTD through November 2017. In context, the price of bitcoin rallied roughly 11x during this period while ETH jumped a whopping 54x, which would imply that a number of funds in the sample were passively holding BTC. This calls into question why investors should pay performance fees to a hedge fund that is just holding an asset.

While the initial performance of crypto hedge funds in aggregate leaves something to be desired, that does not mean that active management is without merit in the crypto space. Arbitrage is a potentially profitable strategy for well-capitalized traders who possess the proper infrastructure across various exchanges and fiat currency pairs. Major discrepancies pop up between the spot values of bitcoin depending on the currency pair. In the last month, discrepancies in the range of 3% to 7% persisted between the spot price of BTC priced in Korean won and US dollar. These spreads are significantly wider in failing states with strong capital controls, like Venezuela and Zimbabwe, where bitcoin has at times traded for the equivalent of 2x the US dollar spot price.

Explicitly passive vehicles are also opening up for investors who want exposure to crypto assets and are willing to pay for the convenience of letting others deal with the operational headache of wallets, keys, etc. Pantera Capital was the first mover into this space in 2014 with the launch of Pantera Bitcoin Partners, a partnership with Fortress, Benchmark Capital and Ribbit Capital that invests in the crypto asset. Grayscale's Bitcoin Investment Trust, launched in 2015, was the first publicly quoted vehicle to track the price of bitcoin, though the fund charges a 2% annualized management fee and often swings wildly in relation to its NAV ($2.46 billion as of January 2) due to liquidity issues that arise when trading large sums in relatively shallow markets.

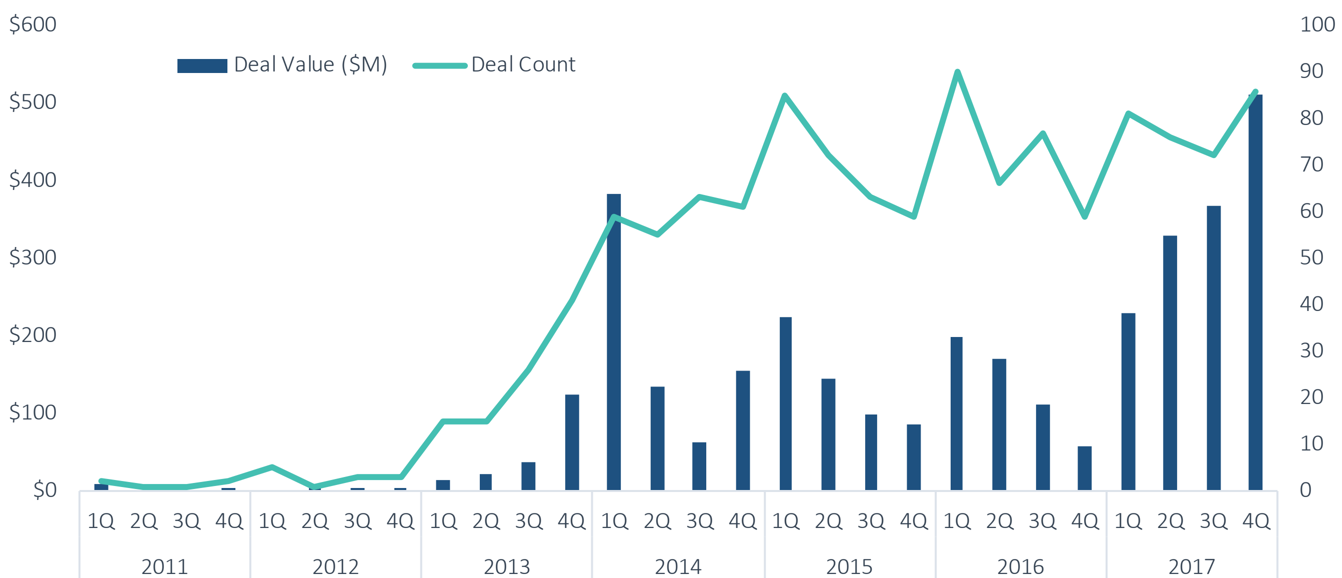
Other players like the Bitwise HOLD10 have attempted to bring the passive investing concept to a basket of crypto assets, charging a 2.5% management fee and periodically rebalancing. These fees dwarf those charged by passively managed equity and fixed income ETFs, but the newness of the market and the premium placed on credibility has limited competition for these new vehicles.

Venture Capital Funds

Given the technical complexity of blockchain technology, private investment in the space has been dominated by a few niche venture funds, as well as several personal investments by venture GPs and super angels. These early movers into the space invested in the broader ecosystem that enabled non-technical users to access Bitcoin and propagate blockchain technology.

During the internet revolution, value accrued to companies around the application layer such as Facebook, Google and Netflix; the blockchain revolution allows value to accrue around the protocols themselves. This would be tantamount to dotcom-era investors having been able to invest in the internet itself. However, early investments in cryptos have mirrored the evolution of the internet, with application-layer companies dominating the list of VC-funded crypto startups. These companies provide tools and services, including wallet software, various flavors of payment services, and enterprise blockchain development. However, in spite of the exponential growth of interest in crypto assets and blockchain, venture capital investment has been more or less flat; the $512 million invested in 4Q 2017 was the first quarterly figure to exceed the previous high-water mark of $382 million invested in 1Q 2014.

Global venture activity in crypto startups



Source: PitchBook
*Data as of 2010 to 12/31/2017

Most active VC investors

FIRM NAME	DEALS CLOSED
Digital Currency Group	102
Blockchain Capital	51
Individual Investor	48
Boost VC	45
Plug and Play Tech Center	39
Pantera	32
500 Startups	30
Techstars	20
Coinsilium Group	19
RRE Ventures	17
FundersClub	16
Andreessen Horowitz	16
Timothy Draper	15
Roger Ver	14
Draper Associates	14
Fenbushi Capital	13
Barry Silbert	13
Y Combinator	12
Union Square Ventures	12
Sean Percival	11

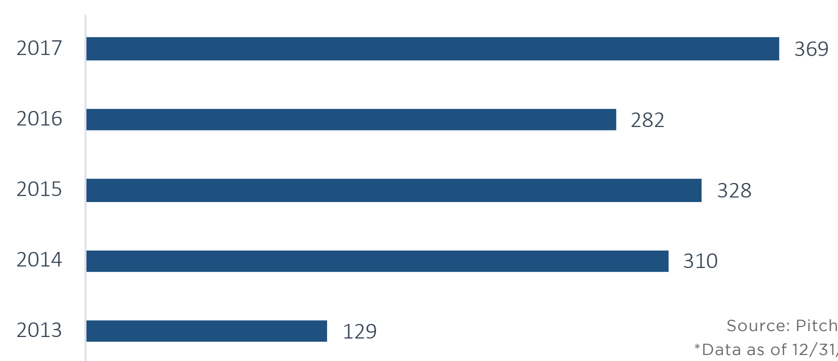
Source: PitchBook
*Data as of 2006 to 12/31/2017

Although VC money has been slow to enter crypto, anecdotally a significant number of founders in the space have been able to partially bootstrap their projects, or at least have the cushion to take on entrepreneurial risk, thanks to the return generated by their own crypto asset investing. Furthermore, smart contracts facilitated by the ETH protocol have enabled entrepreneurs to bypass pre-seed investment by raising non-dilutive financing directly from retail investors.

In the wake of explosive interest in blockchain technology, the private valuations of even the most successful blockchain companies often fails to outpace the meteoric rise of Bitcoin. Even as total crypto asset market cap rockets towards $1 trillion, there is only one company (Coinbase) that has raised a VC round with a valuation over $1 billion. The company raised $108.1 million at a $1.6 post-valuation in August. In a recent research note, we tracked the valuation step-ups of 32 VC investments into blockchain companies completed between 2011 and 2017. We found that only half of the valuation step-ups between those follow-on rounds outpaced the price appreciation of bitcoin during the same period. Furthermore, none of the step-ups have outpaced the price action of bitcoin since the price exceeded $500 during the first half of 2016.

However, our analysis didn't consider companies like Ripple, which is VC-backed but also retains a majority of the XRP token in circulation. At a market price of around $3 on January 4, the company's holdings of 61.3 billion XRP (including 55 billion in escrow) make the company on paper the most valuable private technology company in the world and 10th most valuable company overall by market cap. Cofounder and executive chairman Chris Larson is (on paper) the fifth richest man in the world—tied with Mark Zuckerberg.

First-time VC investors in crypto



Source: PitchBook
*Data as of 12/31/2017

Biggest ICOs of 2017

COMPANY	DATE	CAPITAL RAISED ($M)
Filecoin	August	$257
Tezos	July	$232
EOS	June	$180
Bancor	June	$153
Status	June	$108
Kin	September	$98
MobileGo	April	$53
Electroneum	September	$40

Source: Autonomous Next

Biggest ICOs prior to 2017

COMPANY	DATE	CAPITAL RAISED ($M)
The DAO	May 2016	$150
ETHeum	July 2014	$18.9
Waves	April 2016	$16.0
ICONOMI	August 2016	$10.5
Golem	November 2016	$8.6
SingularDTV	October 2016	$7.5
Maid SafeCoin	April 2014	$7.0
Lisk	February 2016	$6.2

Source: Autonomous Next

ICO Funds

One of the biggest technology stories in 2017 was the newfound popularity of the controversial mechanism for blockchain projects to self-fund. ICOs (initial coin offerings), or token sales, are a method for projects to fund themselves by launching their own crypto asset. Some of these events are conducted by established entities or teams who've spent several years building a product; however, these comprise a small minority of projects. Many of these ICOs represent the promise to distribute future tokens for use on a yet-to-be released distributed platform. Furthermore, given the massive returns for early holders of the more popular crypto assets, investors have developed a severe fear of missing out, which has only increased speculation in the underlying tokens.

To be sure, investors are wise to approach ICOs with caution. The established best practices for equity IPOs don't exist for token sales (e.g., lockup periods and disclosure mandates); however, since it often takes a month or more between an ICO and a token being listed on an exchange, most ICO investors are bound by an implicit lockup.

Despite the apparent risk, an analysis by Luxembourg-based venture firm Mangrove Partners found that investing in 204 ICOs with known returns would have delivered a 13.2x return, despite a number of these offerings declining to 0. As investors learn to navigate the emerging ICO market, institutional investors have several advantages. First of all, they have access to steep discounts via SAFTs (Simple Agreement for Future Tokens) and private pre-sales only open to accredited investors. While each ICO is unique, we'll provide a basic hypothetical to explain how this discount could work in practice.

1. A group of investors puts up capital to launch CryptoStartup, but instead of receiving anything tangible upfront, the investors are simply given the right to purchase up to 10% of the future ICO at a 90% discount.

2. CryptoStartup uses this initial funding to hire a team, write a whitepaper, build infrastructure and lay the groundwork for the project.

3. When it comes time for the ICO, CryptoStartup decides to offer 1 million tokens at 1 ETH each.

4. Under their prior agreement, investors would then have exclusivity to acquire 100,000 of the tokens for just .1 ETH.

Crypto startups are willing to provide ICO discounts to well-known investors largely because of the implicit endorsement their investment provides to a project. By participating early, "institutional" crypto funds lend name recognition and credibility to projects that by and large only exist in a whitepaper hosted on a landing page. This notion in and of itself can drive returns, as retail investors in a momentum-driven market follow the lead of more fund managers, irrespective of whether these managers possess the technical expertise to evaluate the underlying technology.

The Big Picture

While institutional investors are being presented with new access points to crypto assets, the industry is still nascent and investors generally remain under-allocated on a risk-adjusted basis based on the return profile of bitcoin over the last several years. Illiquidity makes it difficult for funds to efficiently allocate capital to cryptos outside the mainstream, and these issues even persist with the likes of bitcoin and ETH, which have relatively deep markets. But these hurdles are not insurmountable, particularly as crypto assets are likely to comprise an exceedingly small portion of a diversified institutional portfolio. As new funds enter the space and crypto exchanges are enhanced, we expect more crypto-focused funds to be launched with both active and passive strategies.