Bitcoin **Brief**

HIGHLIGHTS.

- Bitcoin's diversifying characteristics
- Crypto lending
- Yield solutions

MARKET UPDATE

Bitcoin gained +43% in October and reached a new record high of $66,974 on October 20th. Bitcoin is up nearly 115% YTD.

The month was dominated by news related to the first futures-based bitcoin ETFs. The two ETFs that began trading in October are registered under the Investment Company Act of 1940 ('40 Act) and gain exposure to bitcoin through futures listed on the Chicago Mercantile Exchange (CME). NYDIG views these strategies as trading tools, not investment vehicles, due to the underlying exposures and structural limitations. The costs to roll futures and bitcoin futures positions limits imposed by the CME may result in the performance of these ETFs deviating from spot bitcoin, which is what we've seen during the first few weeks of trading.

Bitcoin's stellar Q3 (+25%) and outstanding October, which followed a challenged Q2 (-41%), remind investors that, like equities, **time in the bitcoin market** is more important than trying to **time the bitcoin market.** As Greg Cipolaro detailed in The Adverse Impacts of Market Timing, bitcoin investors have been better suited staying the course with buy-and-hold strategies than trying to time market tops and bottoms. An investor who successfully avoided bitcoin's five worst months but also missed bitcoin's five best months underperformed a buy-and-hold strategy by nearly 22% per annum over the last five years. In comparison, the adverse impact of trying to time the equity market has been much more forgiving given that bitcoin's strongest monthly returns are more skewed to the right on the distribution curve than equity's strongest monthly returns. Investors who attempt to time the bitcoin market may miss bitcoin's strongest returns.

MARKET STATS.

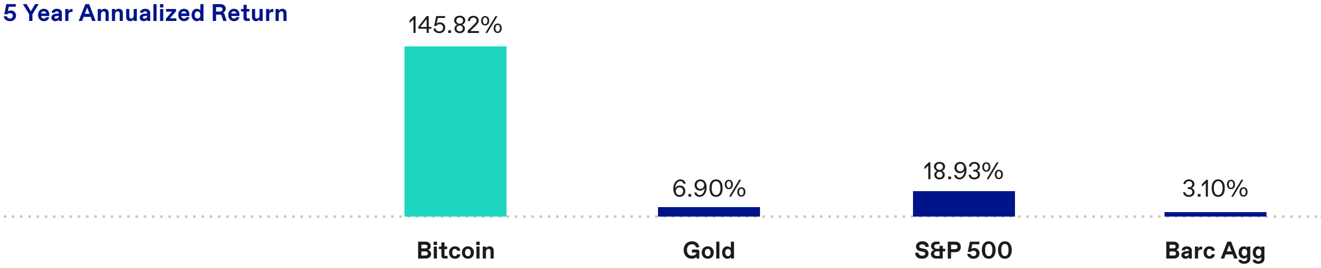
As of 10/31/21

BTC Price	$60,758
BTC Market Cap	$1.15T
% of BTC Total Supply in Circulation	90%
3M Average Daily Bitcoin Transactions	~255K

NOTEWORTHY HEADLINES.

- First Announced U.S. Public Pension Invests in Bitcoin
- Should You Invest in the Bitcoin Futures ETF? Tread Carefully
- US Bank and NYDIG Launch Bitcoin Custody Service
- Gensler Tells the House that the SEC Has No Plans to Ban Crypto
- Powell Tells the House that the Fed Has No Plans to Ban Crypto

5 Year Annualized Return



	Bitcoin	Gold	S&P 500	Barc Agg
5 Yr Sharpe Ratio	1.42	0.49	1.14	0.62

Bitcoin's Diversifying Characteristics

Bitcoin is uncorrelated to other assets. That's one reason for its growing adoption by institutional and retail investors alike. It's rare to find an asset that, over the long term, has had near zero correlations to other markets. Bitcoin routinely bucks the prevailing trends of traditional investments as its returns tend to be unaffected by macroeconomic factors (e.g., economic growth, labor markets, etc.) that influence other asset classes. So noticeable is bitcoin's role as a portfolio diversifier that The Economist recently detailed it.

However, correlations vary, and during periods of market stress, the adage "all correlations go to 1" has been as true for bitcoin as it has for any other asset. NYDIG's Research Team recently looked at the ten worst days for the S&P 500 since 2014 and found that bitcoin tended to struggle on those days as well.

Yield Solutions

While bitcoin lending programs have grabbed the attention of investors and regulators, there are other more conservative income solutions in the marketplace. Call overwriting is a common practice in equity markets and can be done with bitcoin, resulting in known, targeted investment risk with minimal tax risk.[1] It provides holders of bitcoin with the opportunity to generate yield at the cost of foregoing a small portion of potential upside.

As an illustration, an investor could target a 5% yield by implementing a call overwriting strategy on only 30% of their bitcoin portfolio.[2] The specific implementation is through a 1-month 130/160 call spread, whereby the investor would sell call options with a strike 130% of spot, and purchase a call option with a strike 160% of spot. The investor earns USD yield and, in this example, if bitcoin rallied by 40% in a month, the portfolio might give up just 3% and gain 37% instead.[3]

Correlations Increase During Risk-Off Events

Risk-Off Event Date	S&P 500	Bitcoin	Gold	LT Tsys
3/16/2020	-12.0%	-9.2%	-1.5%	6.5%
3/12/2020	-9.5%	-22.9%	-4.1%	0.6%
3/9/2020	-7.6%	-14.0%	0.2%	2.7%
6/11/2020	-5.9%	-5.9%	-0.6%	1.9%
3/18/2020	-5.2%	-0.9%	-2.2%	-5.6%
3/11/2020	-4.9%	-1.9%	-0.5%	-3.7%
2/27/2020	-4.4%	1.0%	0.0%	1.1%
4/1/2020	-4.4%	-4.0%	0.7%	1.4%
3/20/2020	-4.3%	-0.7%	1.1%	7.5%
2/5/2018	-4.1%	-22.2%	0.5%	0.9%
Avg Return	**-6.2%**	**-8.1%**	**-0.6%**	**1.3%**
Risk-Off Correlations Corre	**1**	**0.4**	**0.6**	**-0.3**
Long-Term Correlation	**1**	**0.1**	**(0.0)**	**-0.4**

LT Tsys stands for Long-Term Treasuries

Crypto Lending

Crypto lending rates can appear attractive, but it's important to consider the associated risks. Most critically, regulators have been clear over recent months that many retail lending products may be considered unregistered securities, posing significant risks to any entity involved in the offering.

Setting that primary risk aside, there are other differences that can make bitcoin lending materially riskier than traditional equity securities lending. First, equity securities lending relies upon overcollateralized loans with additional collateral required for more volatile stocks. On the other hand, some retail crypto platforms have unsecured lending arrangements which result in bitcoin lenders taking on significant credit risk with their counterparty. Second, from a taxation standpoint, the Internal Revenue Code states that lending equity securities is not a sale of the security, and therefore no gain or loss needs to be recognized. Bitcoin lending, however, lacks specific tax guidance from the IRS. Lastly, unlike equities, there is a dearth of institutional lenders in the bitcoin space which may encourage platforms to inflate rates as an incentive to attract new retail consumers.

Performance	1MO	3MO	YTD	1YR	3YR*	5YR*
Bitcoin	43.72%	56.81%	114.35%	361.68%	114.89%	145.82%
Gold	1.50%	-1.70%	-6.06%	-5.08%	13.65%	6.90%
S&P 500	7.01%	5.13%	24.04%	42.91%	21.48%	18.93%
Barclays Agg	-0.03%	-1.08%	-1.58%	-0.48%	5.63%	3.10%

*Returns greater than 1 year are annualized.

	5YR Standard Deviation	5YR Sharpe Ratio	5YR Correlation to BTC
Bitcoin	90.4%	1.42	-
Gold	13.3%	0.49	0.11
S&P 500	15.3%	1.14	0.26
Barclays Agg	3.3%	0.62	0.14

Source:

NYDIG, Bloomberg, last available data as of 10/31/21, unless noted otherwise. All prices are 4:00 pm ET prices. Barclays Agg represents the Bloomberg Barclays US Aggregate Total Return Bond Index. Bitcoin returns based on month-end 4pm prices. Monthly bitcoin prices prior to October 2018 are based on Coinbase 4pm pricing. In October 2018, NYDIG began generating bitcoin prices in accordance with NYDIG Asset Management's valuation policy for its bitcoin funds. The monthly bitcoin prices used after October 2018 reflect 4pm prices determined in accordance with such valuation policy, which is the same valuation policy that is used for NYDIG's funds. As there are two different pricing sources for bitcoin reflected, the historical performance of bitcoin shown may be different if the bitcoin prices in accordance with NYDIG Asset Management's valuation policy were used for the entire period or if the Coinbase pricing were used for the entire period. Performance data quoted represents past performance of bitcoin. Past performance of bitcoin is not indicative of future results. Bitcoin has historically exhibited high price volatility relative to more traditional asset classes. The value of an investment in bitcoin or the funds could decline rapidly, including to zero.

[1]FRED Economic Data as of 10/13/21. [2]NYDIG has engaged with Ernst & Young on tax analysis of bitcoin overwriting and received a tax opinion on the treatment in certain contexts. However, you may not rely on Ernst & Young's views and must obtain your own tax advice. [3]Based on indicative yields on 9/30/21. Reference strike price $43,534. Target strike prices can be adjusted based on dynamic market moves. [4]70% of the portfolio gains the full 40%, and the 30% overwriting allocation gains 30%. 70% * 40% + 30% * 30% = 37%.

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Risks Related to Strategies

<u>Risks Related to the Investment Strategy</u>

The investment strategy is newly developed and therefore there is no meaningful performance data on which potential investors may evaluate the strategy. Bitcoin and bitcoin derivatives are a relatively new asset class and are subject to unique and substantial risks. There can be no assurance that your investment objectives will be achieved, that there will be profits or that losses will be avoided. Due to the limited history of digital assets and the rapidly evolving nature of the digital asset market, it is not possible to know all the risks involved in making an investment in digital assets, and new risks may emerge at any time. Currently, there is relatively limited use of any digital asset in the retail and commercial marketplace in comparison to relatively extensive use as a store of value, thus contributing to price volatility that could adversely affect the investment strategy. Digital asset transactions are irrevocable and stolen or incorrectly transferred digital assets may be irretrievable. As a result, any incorrectly executed digital asset transactions could adversely affect your investment. Some purportedly decentralized digital assets may be more centralized than widely believed, or may become more centralized over time, increasing the risk that an adverse event impacting an individual personality or entity could result in a reduction in the price of digital assets and adversely affect the investment strategy. A failure to properly monitor and upgrade network protocol could damage the digital asset networks.

The investment strategy will involve investments in derivatives, including OTC derivatives contracts. The use of derivatives involves risks that are in addition to, and potentially greater than, the risks of investing directly in digital assets, securities and other more traditional assets. It is intended that options will be written to seek to generate income for the investment strategy from premiums, and investments also may be made in derivatives for investment purposes and for hedging and risk management purposes. Certain derivative positions used in the investment strategy involve the risk that, if the volatility of the underlying asset is greater than expected, the investment strategy will bear losses to the extent of the obligations under the relevant derivative contracts, which may not be outweighed by the amount of any premiums received under the investment strategy for the sale of such derivative instruments.

The investment strategy is subject to various increased market risks, including volatility risk and valuation risk, based on the strategy's use of bitcoin and bitcoin derivatives. Bitcoin and other digital assets have generally exhibited tremendous price volatility relative to more traditional asset classes. In addition, certain market factors make valuing bitcoin and bitcoin derivatives more complex and errors may occur.

Specific risks involved in the use of certain types of derivatives in which the investment strategy may invest include options risk, call option risk, position limit risk, clearing risk, counterparty risk, and illiquidity risk. Certain of these risks may be greater for investments in bitcoin and other digital asset derivatives as compared to more traditional asset derivatives.

The investment strategy intends to hold bitcoin and invest in derivatives related to bitcoin and may incur greater losses as a result of non-diversification.

Trading prices for bitcoin have historically been highly volatile. The value of the bitcoin held under the investment strategy could decline rapidly, including to zero.

The bitcoin held under the investment strategy may be subject to loss, theft or restriction on access, each of which could result in the halting of the investment strategy's operations or a loss of the assets. Such losses could result in a reduction in the value of your investment. The custodian of the assets has adopted security procedures intended to protect the assets held under the investment strategy, but there can be no assurance that those procedures will be successful in preventing such loss, theft or restriction on access. You should not invest unless you understand the risk that the possession or control of assets held under the investment strategy may be lost.

The ability of the Advisor, its custodians and security vendors to adopt technology in response to changing security needs or trends poses a challenge to the safekeeping of the bitcoin held under the investment strategy.

There could be unforeseen difficulties in operating and maintaining the investment strategy's security procedures or other key elements of its technical infrastructure.

Fees and expenses will be charged regardless of profitability and may result in the depletion of the assets held under the investment strategy. The value of your investment could decrease if unanticipated operational or trading problems arise. The bitcoin held under the investment strategy is not subject to FDIC or SIPC protections. Service providers, including custodians and security vendors, owe no fiduciary duties to you, are not required to act in your best interest and could resign or be removed by the Advisor.

Risks Related to Tax

The United States tax rules applicable to your investment and the investment strategy are uncertain in many respects and tax consequences could differ from expectations.

The tax treatment of bitcoin could have negative tax consequences.

Your investment in bitcoin or other appreciated property may lead to a recognizable gain as a result of such investment. Although the Advisor intends to operate the strategy to avoid triggering Unrelated Business Taxable Income ("UBTI"), you could nonetheless be subject to UBTI as a result of the investment strategy.

Risks Related to Regulation

Regulatory changes or actions may alter the nature of your investment or restrict the use of digital assets or the operation of digital asset networks or exchanges in a manner that adversely affects the investment strategy. If regulatory changes or interpretations require the regulation of one or more digital assets under the CEA by CFTC and/or under the Securities Act of 1933, as amended, the Exchange Act of 1934, as amended, the Advisers Act or the Investment Company Act of 1940 by the SEC, compliance with these requirements could result in additional expenses or significantly limit the ability to pursue the investment strategy or may adversely affect your investment. It may be or become illegal to acquire, own, hold, sell or use digital assets in one or more countries.

Other Possible Risks

There is no assurance that the above list is complete or that there are no other risks that may exist now or may arise in the future.

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