Getting Off Zero

Bitcoin’s Role in Modern Investment Portfolios
Contents

Institutional Investor Survey Overview

Study Highlights

Getting Off Zero

Traditional Portfolios and Opportunity Cost

Typical Bitcoin Investment Thesis

Position Sizing and Portfolio Implications
Institutional Investor Study Highlights

Current Adoption & Channels to Exposure
- 52% of respondents surveyed are invested in digital assets.
- In Europe, 84% of high-net-worth individuals surveyed are investing in digital assets.
- In the U.S., there was a 20-percentage point increase in financial advisors surveyed invested in digital assets.

Perception of Digital Assets
- 70% of all investors surveyed have a neutral to positive perception of digital assets.
- In the U.S., 79% of family offices surveyed said they had a neutral to positive view of digital assets.
- Virtually all financial advisors surveyed in Asia have a neutral to positive perception of digital assets.

Appeal of Digital Assets
- Nearly 9 in 10 investors surveyed said they find digital assets appealing.
- The most appealing attribute of digital assets for institutions surveyed is the high potential upside.

Barriers to Adoption
- 54% of surveyed investors believe that price volatility is one of the greatest barriers to investment.
- 44% of investors surveyed share the lack of fundamentals to gauge appropriate value as a barrier to investment.

Digital Assets in a Portfolio
- Nearly 8 in 10 investors surveyed feel digital assets have a place in a portfolio.
- 40% of investors surveyed identify digital assets as part of the alternative asset class.

Digital Asset Investment Products
- 84% of U.S. & European investors surveyed indicated they would be interested in institutional investment products that hold digital assets.
- All investor segments surveyed across the U.S., Europe, and Asia preferred active management investment products containing digital assets.

Tokenization & U.S. Central Bank Digital Currency
- 27% of US & European investors surveyed believe real estate has great potential for tokenization, a 12-percentage point decrease from the previous survey.
- 69% of all respondents had a neutral-to-positive view of a U.S. dollar-backed CBDC.
Traditional Portfolios — Fixed Income

Rates have created a 40-year tailwind

- Interest rates create a risk-free opportunity cost, act as a baseline for all investments and embed themselves in every asset class.
- Rates have declined from >15% in 1981 to <2% today.

Historic Benefits

- Bonds have historically provided adequate income (yield), capital appreciation and portfolio diversification.

Forward Outlook

- Each of the above listed benefits appears likely to be impaired to varying degrees going forward.
- Typical portfolio benchmarks (60/40) have 40% invested in an asset that appears likely to return a nominal CAGR of <2%.

The data [above] speaks for itself – starting yields are crucial to forward returns for bonds.

Traditional Portfolios & Macro Backdrop

Global Sovereign Debt to GDP at All-time Highs
• U.S. public debt to GDP is nearly 130%.
• This excludes off-balance sheet liabilities associated with entitlement programs like Social Security and Medicare (estimated to be at least 2 times as large).

Leveraged Systems Become More Fragile

Forward Outlook
• Normalization revolves around what happens to these global sovereign balance sheets. Options include:
  • Real GDP Growth
  • Debt Default & Restructuring
  • Financial Repression (Negative Real Interest Rates)

Investment Thesis - Inflation Hedge

Scarce Assets Have Historically Hedged Negative Changes in Real Interest Rates

- 21 million token hard supply cap has given bitcoin a “digital gold” narrative.
- Bitcoin has shown an ability to provide a hedge against monetary debasement and broad asset price inflation.
- haven’t seen material changes in forward CPI expectations throughout the duration of bitcoin’s existence, but historically scarcity has done well during periods of financial repression.

Investment Thesis - Portfolio Diversifier

**Bitcoin is an Alternative Asset with Truly Alternative Characteristics**

- Correlations between bitcoin and traditional assets has remained low throughout historical data.
- Like gold, bitcoin is still susceptible to correlation during large, risk-off events with other risk-on assets such as stocks.
- Over the long-term, the drivers of bitcoin’s ultimate success or failure are driven by truly alternative outcomes. The growth in user adoption, the broadening and deepening of the digital asset ecosystem and build out of layer 2 solutions such as the lightning network.

Investment Thesis - Venture-like Return Profile

Asymmetric Return Profile

- The historic monthly return data shows a more extreme, skewed monthly return from bitcoin vs. equities.
- The return profile offered with bitcoin appears similar in nature to venture capital investments.

Large Total Addressable Market

- Bitcoin’s TAM is massive. Today, bitcoin has market cap of around $1 trillion vs other store of value assets like gold (~$10 trillion) and fixed income (~$130 trillion)
- The skewed return profile and TAM give bitcoin the ability to have meaningfully positive impacts on returns via small positions

Getting Off Zero: Position Sizing Considerations

Small Positions in Traditional Portfolios

- The first 50-100 basis points has historically added the most efficient increase in risk-adjusted returns to an otherwise traditional portfolio.
- Portfolios with zero exposure to bitcoin have historically had a far lower Sharpe than portfolios with small or large positions in bitcoin.
- Allocations beyond 1-3% of exposure begin to largely make tradeoffs between risk and return, rather than making increases in portfolio efficiency.

<table>
<thead>
<tr>
<th>Allocation to Bitcoin</th>
<th>0%</th>
<th>1%</th>
<th>3%</th>
<th>5%</th>
<th>7%</th>
<th>10%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Return</td>
<td>9.89%</td>
<td>12.49%</td>
<td>17.24%</td>
<td>21.54%</td>
<td>25.52%</td>
<td>31.01%</td>
</tr>
<tr>
<td>Annual Volatility</td>
<td>8.70%</td>
<td>9.23%</td>
<td>11.26%</td>
<td>13.72%</td>
<td>16.19%</td>
<td>19.71%</td>
</tr>
<tr>
<td>Sharpe Ratio</td>
<td>1.03</td>
<td>1.23</td>
<td>1.4</td>
<td>1.43</td>
<td>1.44</td>
<td>1.43</td>
</tr>
<tr>
<td>Maximum Drawdown</td>
<td>-11.16%</td>
<td>-11.43%</td>
<td>-11.96%</td>
<td>-12.49%</td>
<td>-13.01%</td>
<td>-13.78%</td>
</tr>
</tbody>
</table>

The information herein was prepared by Fidelity Digital Asset Services, LLC and Fidelity Digital Assets, Ltd. It is for informational purposes only and is not intended to constitute a recommendation, investment advice of any kind, or an offer or the solicitation of an offer to buy or sell securities or other assets. Please perform your own research and consult a qualified advisor to see if digital assets are an appropriate investment option.

Services provided by Fidelity Digital Asset Services, LLC, a New York State-chartered, limited liability trust company (NMLS ID 1773897) or Fidelity Digital Assets, Ltd. Fidelity Digital Assets, Ltd. is registered with the U.K. Financial Conduct Authority for certain cryptoasset activities under the Money Laundering, Terrorist Financing and Transfer of Funds (Information on the Payer) Regulations 2017. The Financial Ombudsman Service and the Financial Services Compensation Scheme do not apply to the cryptoasset activities carried on by Fidelity Digital Assets, Ltd.

This information is not intended for distribution to, or use by, any person or entity in any jurisdiction or country where such distribution or use would be contrary to local law or regulation. Persons accessing this information are required to inform themselves about and observe such restrictions. Digital assets are speculative and highly volatile, can become illiquid at any time, and are for investors with a high-risk tolerance. Investors in digital assets could lose the entire value of their investment. Fidelity Digital Asset Services, LLC and Fidelity Digital Assets, Ltd. do not provide tax, legal, investment, or accounting advice.

This material is not intended to provide, and should not be relied on, for tax, legal, or accounting advice. Tax laws and regulations are complex and subject to change. You should consult your own tax, legal, and accounting advisors before engaging in any transaction. Some of this information is forward-looking and is subject to change. Past performance is no guarantee of future results. Investment results cannot be predicted or projected.

Fidelity Digital Assets and the Fidelity Digital Assets logo are service marks of FMR LLC.

© 2022 FMR LLC. All rights reserved.