

DECEMBER 2023

The BLOK-Chain Monthly

Staying Up-to-date with the Rapidly
Evolving Blockchain Technology

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of the Amplify Transformational Data Sharing ETF (BLOK)

NOVEMBER MONTHLY

Amplify Transformational Data Sharing ETF (BLOK) NAV returns are up 57.47% YTD after a 16.79% rally in November. Blockchain as a technology is more than just the transfer of value using Bitcoin or Ethereum. It helps industries operate more efficiently as a whole. In last month's report we highlighted the effectiveness of the blockchain at banks, like JP Morgan, who used tokenization to transfer value more efficiently over their system. We believe that as the financial rails with regulatory scrutiny prove that tokenization can work to store and save value, other industries will embrace the benefits to help solve their own defined issues. We have seen evidence of this lately through the acceleration of patent filing on Non-Fungible Tokens (NFTs) by many major firms. Investors need to think beyond just the Bored Apes craze when they think about NFTs, as the image only represents a fraction of the potential. More to the point, as we believe blockchain will prove to provide innovation, disruption, and transformation of industries, for those who are paying attention. This technological change may come faster than people think. NFTs can represent digital or real-world items like real estate, investments, and even healthcare data records. Wouldn't it be beneficial to store and transfer your healthcare records over your own lifecycle? The healthcare system is too bloated to refuse to acknowledge the benefits of blockchain: immutability, speed, and ease of transferability.

The performance data quoted represents past performance. Past performance does not guarantee future results. The investment return and principal value of an investment will fluctuate so that an investor's shares, when sold or redeemed, may be worth more or less than their original cost and current performance may be lower or higher than the performance quoted. For performance data current to the most recent month-end please visit [BLOKETF.com](https://www.blokETF.com).

In 2023, Dematerialzd.xyz pointed out in two graphs that "brands filed 14 times more patents than in 2020, seven times more than in 2021 and almost double the number in 2022." These graphs illustrate the near-term trend highlighted by patent filing, but we also note that not all patents will be enforced and not all patents will lead to developments. Nevertheless, they do signify use cases and possibly the next leg up in the adoption curve. We found this article, "Key Insights from 3,200+ NFT Patents", written by Marc Baumann insightful.¹

TOP 10 HOLDINGS (as of 11/30/2023)

TICKER	COMPANY	% WT.
MSTR	MICROSTRATEGY INC	5.16%
GLXY CN	GALAXY DIGITAL HOLDINGS	4.95%
COIN	COINBASE GLOBAL INC	4.82%
CLSK	CLEANSARK INC	4.45%
8473 JP	SBI HOLDINGS INC	3.89%
BYON	BEYOND INC	3.60%
PYPL	PAYPAL HLDGS INC	3.23%
CME	CME GROUP INC	3.08%
RIOT	RIOT PLATFORMS INC	3.07%
9449 JP	GMO INTERNET GROUP	3.04%

Holdings and allocations are subject to change at any time and should not be considered a recommendation to buy or sell any security.

FIG. 1: NFT RELATED PATENT APPLICATIONS BY TOP BRANDS: DECEMBER 2019 TO NOVEMBER 2023.

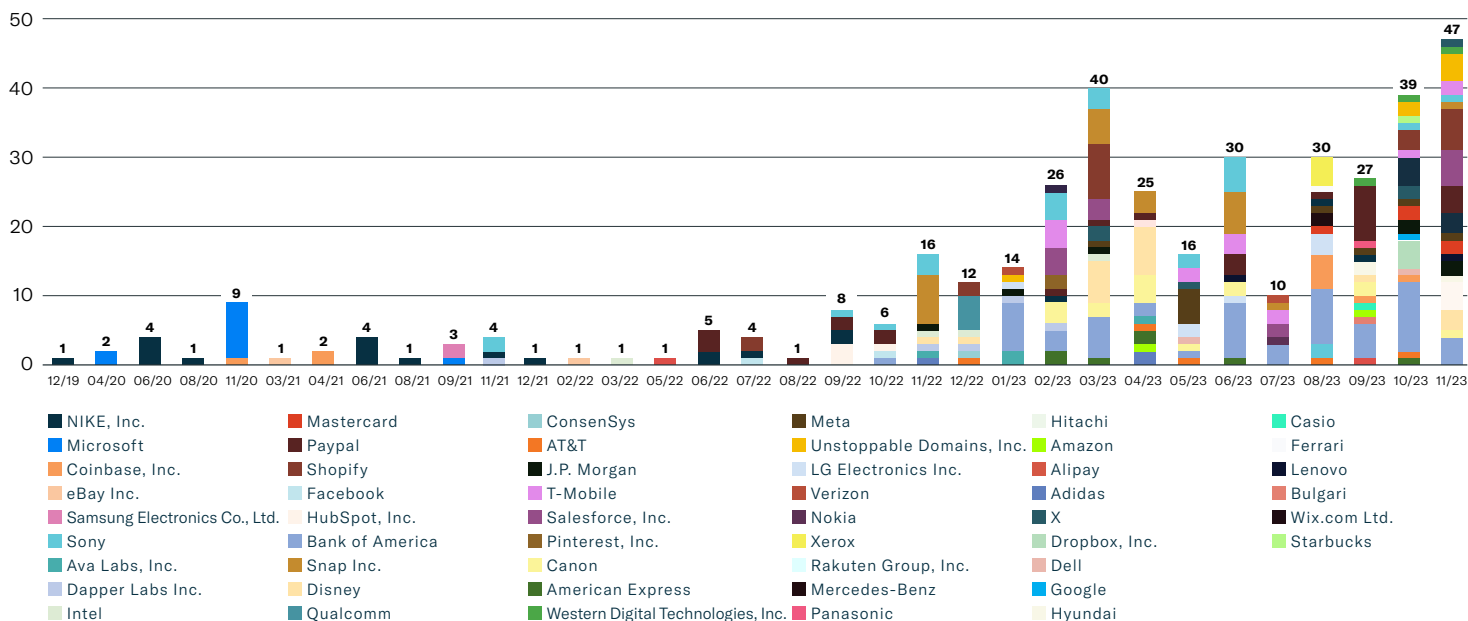


Figure 1. NFT Related Patent Applications by Top Brands: December 2019 to November 2023. The number of NFT-Related Patent Applications has increased significantly over time. Source: World Intellectual Property Organization

FIG. 2: NUMBER OF NFT-RELATED PATENT APPLICATIONS BY TOP BRANDS: JANUARY 2019 TO AUGUST 2023.

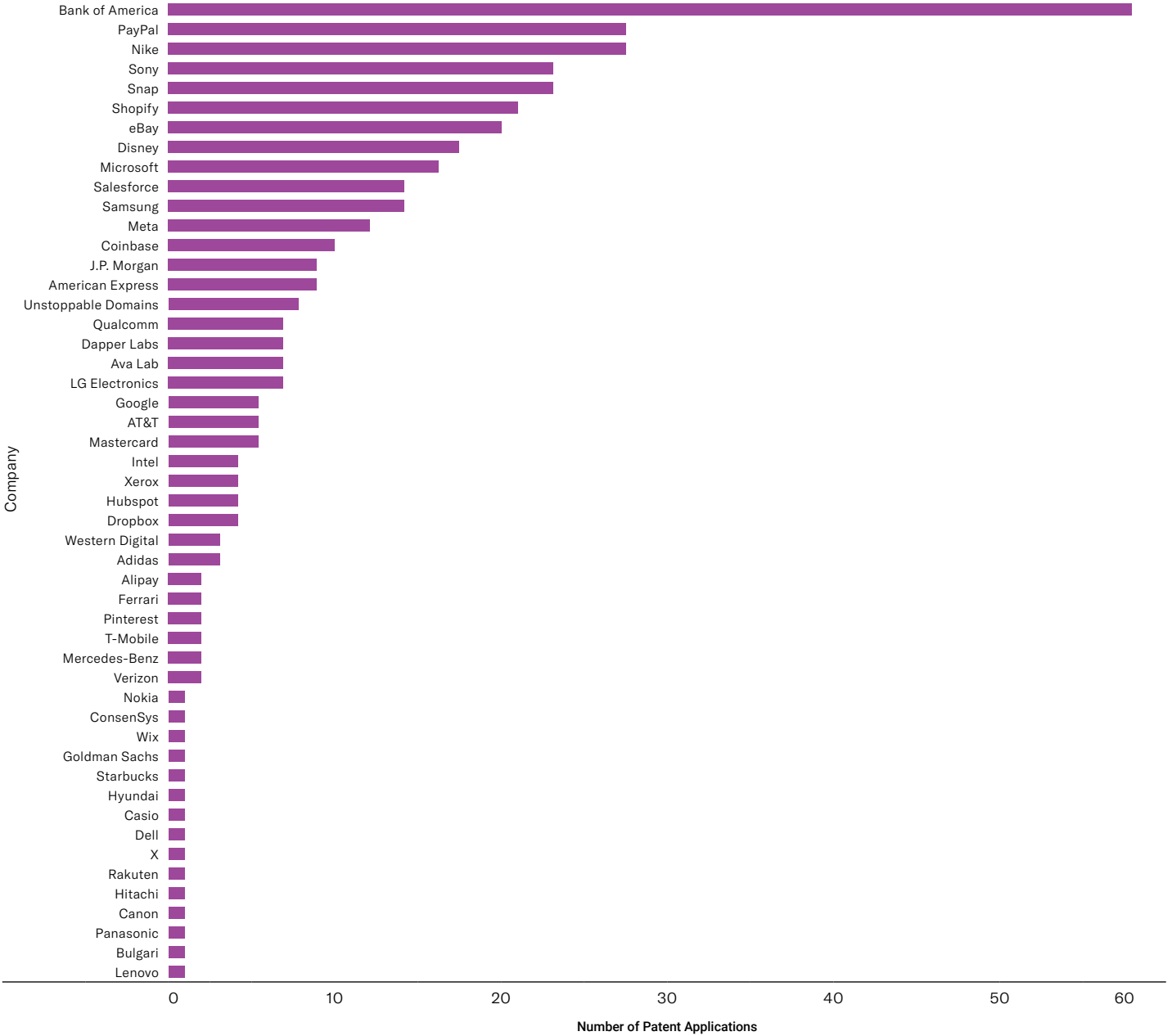


Figure 2. Number of NFT-Related Patent Applications by Top Brands: January 2019 to August 2023. Source: World Intellectual Property Organization

MINERS: NETWORK HASHRATE

In the report last month, we highlighted that the Hashrate of the bitcoin mining network accelerated ahead of the price of bitcoin. Again, computer hash is a simple form metric that represents the processing power on the network that is solving the bitcoin algorithm to secure the network and make it operate efficiently. Since the business model for Bitcoin (BTC) miners is linked to how the computers compete randomly for bitcoin, the 900 BTC rewards historical trends in Hash levels have been correlated with the price of Bitcoin and can also be volatile as institutional facilities come online across the globe. As such, when BTC price increased last month by about nine percent, Hash increased by only four percent and showed some signs of slowing momentum. It made rational sense that the stock prices of the miners would play catch up (Figure 3).

FIG. 3: NETWORK HASHRATE SEVEN DAY SIMPLE MOVING AVERAGE: DECEMBER 2022 TO 2023.

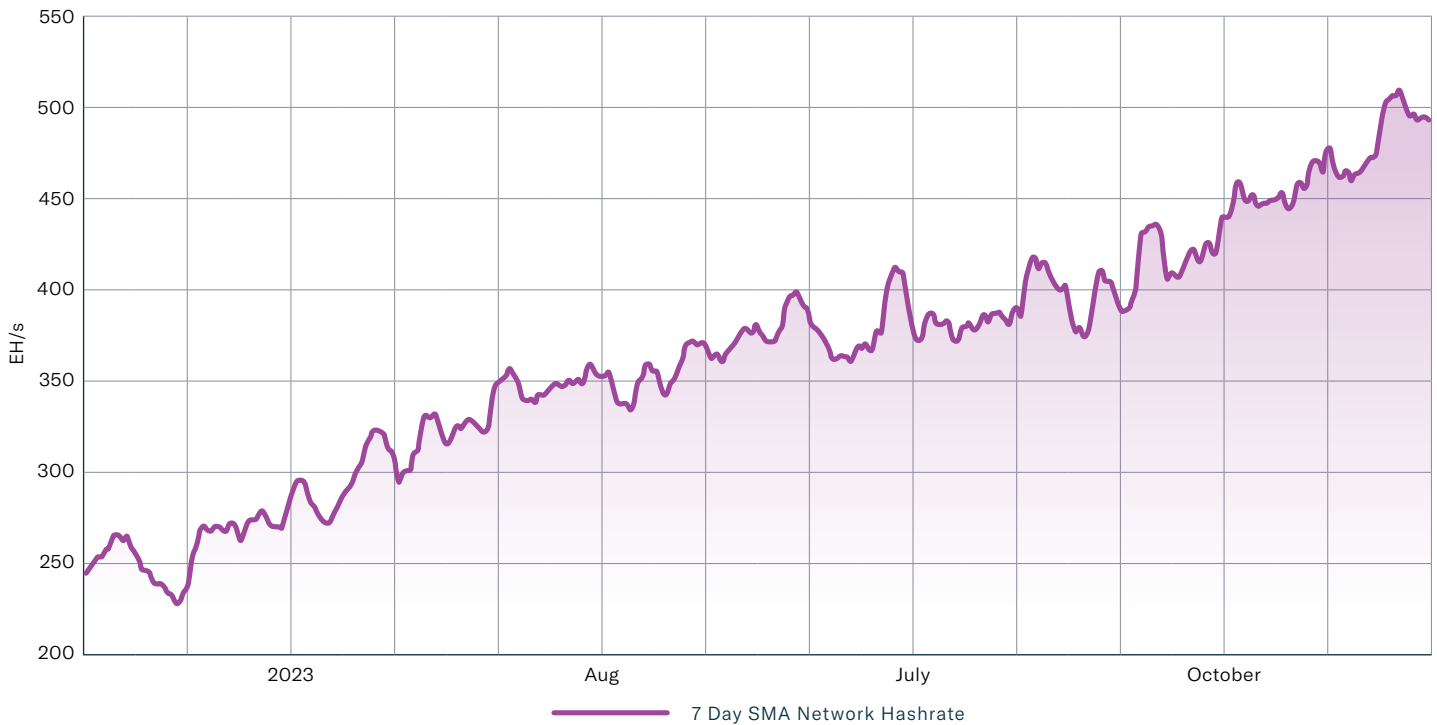


Figure 3. Network Hashrate Seven Day Simple Moving Average: December 2022 to 2023. Hash rate is measured by the number of hashes per second on a blockchain network. A higher hash rate reflects a larger blockchain network. Exahash per second (EH/s) is one quintillion hashes per second. Source: hashrateindex.com, "Bitcoin Network Hashrate". Data as of December 2023.

Last month we added Cipher Mining (CIFR) to the portfolio. Our visit to the Cipher facility and meetings with their management improved our confidence in the firm's long-term plans to dramatically increase their capacity on top of their ability to draw on low-cost energy. To this end, later in the month we also found evidence for optimism from action taken by Bitfarms' to implement a "transformational fleet upgrade" while tapping institutional investors in an "accretive" deal with Bitmain.² If all goes according to plan, Bitfarm's management expects that the payback period on its purchase could be within 12-14 months. Obviously, there is execution risk in such assumptions, but when equipment is depreciated over a two-to-three-year period and paid for in a 12-14 month period, the margin earned over the life of the acquisition can make for a very high return on invested capital.

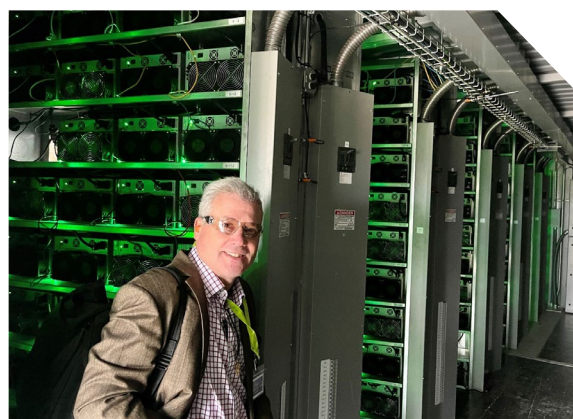
ATTRIBUTION

The positive performance in November was led by a 1.73% contribution from Cleanspark which was up 52.20% in the month. Other miners like Marathon Digital, Bitfarms, and RIOT Platforms also had great rallies, up 35.87%, 36.51%, and 28.32% and contributed individually 0.86%, 0.98%, and 0.79%, respectively. In aggregate, the miners contributed about 4% to the almost 16% return for the month, with Hut8 showing an ~11% loss and HIVE about flat. The good news is that this performance demonstrates that the overall portfolio had a great deal of momentum and was not overly concentrated in this group. Major contributions also came from the Platform-Transactional category which includes Coinbase, up 61.72%, Galaxy Digital up 34.56%, and Block, up 57.59%. These three holdings contributed individually 2.91%, 1.55%, and 1.22% respectively, or 5.68% in aggregate. Most importantly, while we were forced to trim back some of Coinbase due to our process of diversification, we see trading volume increasing momentum and regulatory progress redefining the strong position the firm is in with regards to crypto trading.

TRANSACTIONS AND REPOSITIONING

The very substantial move in Coinbase Global and Galaxy Digital led to the decision to trim these two positions, as they eclipsed our upward bands as core holdings. This is a risk management process decision and not a reflection of their value or our views on the opportunities ahead for these companies. Nevertheless, moving incrementally to capture profits inside an ETF has its advantages, and we remain firm believers in diversification of risk and upside. We also made some changes to non-core holdings by selling 100% of the position in Cisco Systems (CSCO) and increasing the exposure to Alibaba (BABA), Robinhood (HOOD), and DBS group (DBS SP). Non-core or "Secondary" holdings are typically around 1%. CACI International (CACI), an electronics defense contractor, was also added. CACI acquired Bluestone -analytics back in 2021, which provides software and tools that track the dark-pools associated with the on-ramps and offramps of fiat and crypto currency. Making the world a safer place through technology is what CACI is about, and we believe tracking transactional data of tokens and crypto on the blockchain is a subtle, but broad opportunity in the evolutionary change ahead. CACI has a long history as a serial acquirer, and while this acquisition is small relative to its \$7 billion in market value, owning a defense contractor expanding and capitalizing on the Blockchain made sense to us given all the uncertainty in this world. In the third quarter, backlog increased to \$26.7 billion, up 7% on a year-over-year basis, and funded backlog increased even more to \$4.2 billion, up 14%.

We also added a 1% position in Cipher Mining (CIFR) after visiting their site in Odessa, Texas, and meeting with their management at headquarters. Cipher's buildout may be slower than what is taking place at RIOT, Marathon, and Cleanspark, but it is also being more careful with equity dilution and is a very efficient miner. Site visits are an important element to our due diligence process. Over the years, we have traveled to many sites in Texas, and visited sites in North Carolina, Pennsylvania, New York, Georgia and even as far as Iceland. Facilities are rarely configured the same and their buildouts have most often required a customized and innovative approach to squeezing out rig efficiencies. Ironically, while bitcoin is often hailed as a solution to a trustless society, the ingenuity of a bitcoin operation is very much about its people and location. Call us to hear stories.



BLOK Portfolio Manager, Dan Weiskopf, visiting the Cipher Mining facility in Odessa, Texas.

EDUCATION

For those who just want to get educated about the blockchain, here are some resources:

- Basic Blockchain Knowledge: <https://content.settlemint.com/blockchain-in-capital-markets>
- Advanced Blockchain Knowledge: <https://www.bankofengland.co.uk/-/media/boe/files/paper/2023/regulatory-regime-for-systemic-payment-systems-using-stablecoins-discussion-paper.pdf>
- Satoshi Nakamoto Original Bitcoin White paper: Bitcoin: A Peer-to-Peer Electronic Cash System <https://bitcoin.org/bitcoin.pdf>

SUMMARY

Amplify Transformational Data Sharing ETF (BLOK) NAV returns are up 57.47% YTD after a 16.79% increase in November. This performance has been led by speculation around Bitcoin price driving higher as there seems to be more evidence that a Spot Bitcoin ETF will be launched. However, while price and stock performance matter a great deal to us, we think the benefits of the transformation that is upon us is evidenced by an acceleration of patent growth targeted at blockchain and the innovation that will be driven by the next leg of optimism around the disruption across industries.

Thank you for your continued confidence in us. We appreciate that the risks and volatility do not always make it easy to share our vision.

ABOUT BLOK

The Amplify Transformational Data Sharing ETF (BLOK) is an actively managed fund that seeks to provide total return by investing at least 80% of its net assets (plus borrowings for investment purposes) in the equity securities of companies actively involved in the development and utilization of “transformational data sharing technologies”.

We seek to identify the leading companies focused on the transformation and development of the blockchain and cryptocurrency markets. The managers focus on how companies can capture the growth, innovation, and disruption of the blockchain paradigm shift. The evolution of the internet has changed how people communicate. We believe growth companies that embrace blockchain evolution will capture secular growth trends that are accelerating and disrupting core processes in business.

BLOK PERFORMANCE

MONTH END AS OF 11/30/2023	CUMULATIVE (%)					ANNUALIZED (%)				
	1 MO.	3 MO.	6 MO.	YTD	SINCE INCEPTION	1 YR.	3 YR.	5 YR.	SINCE INCEPTION	
Fund NAV	16.79%	9.78%	19.62%	57.47%	44.66%	41.63%	-2.57%	11.42%	6.49%	
Closing Price	16.74%	9.46%	19.40%	59.13%	44.78%	42.20%	-2.56%	11.49%	6.51%	
QUARTER END AS OF 09/30/2023	1 MO.	3 MO.	6 MO.	YTD	SINCE INCEPTION	1 YR.	3 YR.	5 YR.	SINCE INCEPTION	
Fund NAV	-8.96%	-12.08%	2.92%	30.59%	19.96%	7.65%	-1.68%	3.42%	3.24%	
Closing Price	-9.33%	-12.40%	-3.00%	31.81%	19.93%	7.73%	-1.80%	3.43%	3.24%	

Fund inception date: (01/17/2018). The performance data quoted represents past performance. Past performance does not guarantee future results. The investment return and principal value of an investment will fluctuate so that an investor's shares, when sold or redeemed, may be worth more or less than their original cost and current performance may be lower or higher than the performance quoted.

Short-term performance, in particular, is not a good indication of the fund's future performance, and an investment should not be made based solely on returns. For performance data current to the most recent month-end please call 855-267-3837 or visit BLOKETF.com. Brokerage commissions will reduce returns. BLOK's gross expense ratio is 0.75%.

APPENDIX A: MONTHLY DETAILED PERFORMANCE CONTRIBUTION CHART *(For period 10/31/2023 - 11/30/2023)*

	Average Weight (%)	Total Return (%)	Contribution to Return (%)
AMPLIFY TRANSFORMATIONAL DATA SHARING ETF			
Information Technology	42.64	14.59	6.29
MICROSTRATEGY INC	5.40	17.69	0.92
CLEANSARK INC	3.46	52.20	1.73
GMO INTERNET GROUP INC	3.16	11.54	0.38
ACCENTURE PLC	2.89	12.13	0.36
RIOT PLATFORMS INC	2.88	28.32	0.79
BITFARMS LTD/CANADA	2.87	36.51	0.98
HUT 8 CORP	2.57	-11.27	-0.32
MARATHON DIGITAL HOLDINGS	2.54	35.87	0.86
INTL BUSINESS MACHINES CORP	2.35	10.87	0.26
HIVE DIGITAL TECHNOLOGIES	2.29	0.45	0.01
ADVANCED MICRO DEVICES	1.99	23.01	0.43
DIGITAL GARAGE INC	1.86	5.68	0.11
TAIWAN SEMICONDUCTOR	1.65	12.74	0.21
ORACLE CORP	1.47	12.39	0.18
COMPOSECURE INC	1.17	-17.25	-0.24
OPERA	1.14	-4.15	-0.04
CANAAN INC	0.99	-21.35	-0.25
CIPHER MINING INC	0.87	-16.82	-0.04
CISCO SYSTEMS INC	0.55	-7.40	-0.07
MSTR 6 1/8 06/15/28	0.40	2.30	0.01
BIGG DIGITAL ASSETS INC	0.12	11.42	0.01
Financials	38.52	19.29	7.29
COINBASE GLOBAL INC	5.45	61.72	2.91
GALAXY DIGITAL HOLDINGS	5.00	34.56	1.55
SBI HOLDINGS INC	4.16	1.80	0.09
PAYPAL HOLDINGS INC	3.29	11.22	0.34
CME GROUP INC	3.24	2.30	0.07
NU HOLDINGS	2.95	-0.73	-0.02
BLOCK INC	2.62	57.59	1.22
CUSTOMERS BANCORP INC	2.48	12.09	0.35
WISDOMTREE INC	1.61	5.49	0.09
MASTERCARD INC	1.55	9.96	0.16
VISA INC	1.40	9.41	0.14
FRANKLIN RESOURCES INC	1.34	8.82	0.12
DBS GROUP HOLDINGS	1.32	0.67	0.01
BLACKROCK INC	0.99	22.69	0.22
ROBINHOOD MARKETS INC	0.77	-3.72	-0.02
MOGO INC	0.35	12.62	0.05

	Average Weight (%)	Total Return (%)	Contribution to Return (%)
Consumer Discretionary	5.49	18.05	1.00
BEYOND INC	3.27	23.21	0.75
MERCADOLIBRE INC	1.25	30.60	0.36
ALIBABA GROUP HOLDING	0.97	-9.28	-0.11
Communication Services	4.36	20.46	0.85
ROBLOX CORP	2.74	23.58	0.61
LY CORP	1.62	15.38	0.25
Consumer Staples	0.71	-4.72	-0.03
WALMART INC	0.71	-4.72	-0.03
Industrials	0.09	-0.07	0.00
CACI INTERNATIONAL INC	0.09	-0.07	0.00
Not Classified	8.20	6.08	0.52
CRIIBZ Float 04/29/25	2.15	3.05	0.07
PURPOSE BITCOIN ETF	2.10	9.21	0.20
CI GALAXY BITCOIN ETF USD	1.71	9.24	0.16
INVESCO GVT & AGENCY-INST	1.39	0.43	0.01
BITCOIN ETF-USD	0.44	9.26	0.04
3IQ BITCOIN ETF	0.41	9.64	0.04
US DOLLAR	0.00	0.00	0.00
CHINA RENMINBI	0.00	2.39	0.00

Holdings and allocations are subject to change at any time and should not be considered a recommendation to buy or sell any security.

¹ <https://www.dematerialzd.xyz/p/exclusive-key-insights-from-3200>

² <https://investor.bitfarms.com/news-events/press-releases/detail/219/bitfarms-initiates-transformative-fleet-upgrade-that>

Carefully consider the Fund's investment objectives, risks, charges and expenses before investing. This and other information can be found in the Fund's statutory and summary prospectus, which may be obtained at [AmplifyETFs.com](https://amplifyetfs.com). Read the prospectus carefully before investing.

Click [HERE](#) for BLOK's top 10 holdings.

Click [HERE](#) for BLOK's prospectus.

Investing involves risk, including the possible loss of principal. Shares of any ETF are bought and sold at market price (not NAV), may trade at a discount or premium to NAV and are not individually redeemed from the Fund. The Fund's return may not match or achieve a high degree of correlation with the return of the underlying Index.

The Fund is subject to management risk because it is actively managed. Narrowly focused investments typically exhibit higher volatility. A portfolio concentrated in a single industry, such as companies actively engaged in blockchain technology, makes

it vulnerable to factors affecting the companies. The Fund may face more risks than if it were diversified broadly over numerous industries or sectors. Blockchain technology may never develop optimized transactional processes that lead to realized economic returns for any company in which the Fund invests.

The Fund invests at least 80% of the Fund's net assets in equity securities of companies actively involved in the development and utilization of blockchain technologies. Such investments may be subject to the following risks: the technology is new and many of its uses may be untested; theft, loss or destruction; competing platforms and technologies; cybersecurity incidents; developmental risk; lack of liquid markets; possible manipulation of blockchain-based assets; lack of regulation; third party product defects or vulnerabilities; reliance on the Internet; and line of business risk. The investable universe may include companies that partner with or invest in other companies that are engaged in transformational data sharing or companies that participate in blockchain industry consortiums. The Fund will invest in the securities of foreign companies. Securities issued by foreign companies present risks beyond those of securities of U.S. issuers.

The Fund may have exposure to cryptocurrencies, such as bitcoin, indirectly through investment funds. Investing in cryptocurrency is highly speculative and is only appropriate for investors who understand the associated risks and likelihood of extreme volatility. Investors in cryptocurrency should be prepared to lose their entire investment. The fund does not invest directly in bitcoin. Holding a privately offered investment vehicle in its portfolio may cause the Fund to trade at a premium or discount to NAV. Many significant aspects of the U.S. federal income tax treatment of investments in cryptocurrencies are uncertain and such investments, even indirectly, may produce non-qualifying income for purposes of the favorable U.S. federal income tax treatment generally accorded to regulated investment companies.

Amplify Investments LLC is the Investment Adviser to the Fund and Toroso Investments, LLC serves as the Investment Sub-Adviser.

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