

Harbor Disruptive Innovation ETF

Harbor Capital Advisors, Inc.

Manager Since 12/01/2021

Ticker: INNO
CUSIP: 41151J307
Net Expense Ratio: 0.75%
Gross Expense Ratio: 0.75%
Total Net Assets: \$27,173,511
Benchmark 1 Name: S&P 500 Index
Benchmark 2 Name: Russell 3000® Growth Index

Portfolio Managers



Spenser Lerner, CFA



Kristof Gleich, CFA

Investment Philosophy

The Fund invests primarily in equity securities, principally common and preferred stocks of all cap companies. Under normal market conditions, the Fund invests at least 80% of its net assets, plus borrowings for investment purposes, in securities of U.S. domiciled companies. The Fund employs a multi-manager approach to achieve its investment objective. As the Fund's investment advisor, Harbor Capital Advisors, Inc. ("Harbor Capital") assumes responsibility of selecting and overseeing underlying managers for the Fund. Each underlying manager is responsible for submitting a model portfolio to Harbor Capital which the portfolio managers will implement in their discretion. The Fund seeks to invest in companies that are innovative and disruptive. The Fund defines innovation and disruption by those companies that are generating secular growth - that growth is typically tied to accelerating shifts in the global economy. The Fund may invest up to 20% of its total assets in the securities of foreign issuers, including issuers located or doing business in emerging markets.

CHARACTERISTICS & ALLOCATION

As of 03/31/2023

Portfolio Characteristics			
	Portfolio	Bench 1	Bench 2
Number of Holdings	94	503	1,604
Wtd Avg Market Cap (\$Mil)	206,041.50	542,489.20	770,601.70
Median Market Cap (\$Mil)	16,804.00	30,280.00	2,250.00
Price/Book Ratio	8.64	5.68	11.72
Adjusted Trailing P/E Ratio	49.40	27.90	28.00
% EPS Growth - Past 3 Yr	20.80	22.20	23.10
Est 3-5 Yr EPS Growth Rate (%)	18.60	12.20	15.20
Return on Equity (%)	7.45	23.62	31.69
Forecasted P/E Ratio	40.50	21.60	27.60

Economic Sectors			
	Portfolio %	Bench 1 %	Bench 2 %
Information Technology	45.65	26.06	40.30
Health Care	19.38	14.21	12.05
Consumer Discretionary	11.87	10.10	14.04
Financials	8.21	12.87	6.66
Communication Services	5.18	8.12	6.86
Materials	2.21	2.64	1.45
Utilities	2.10	2.88	0.14
Industrials	0.59	8.67	8.67
Real Estate	0.00	2.56	1.45
Consumer Staples	0.00	7.22	5.86
Energy	0.00	4.60	1.64

Top 10 Holdings			
	Portfolio %	Bench 1 %	Bench 2 %
Workday Inc. Class A	3.85	0.00	0.20
MercadoLibre Inc.	3.74	0.00	0.00
Lam Research Corporation	3.72	0.21	0.35
ServiceNow Inc.	3.51	0.27	0.46
Adyen NV	3.49	0.00	0.00
Microsoft Corporation	3.29	6.25	10.44
Amazon.com Inc.	3.20	2.68	4.44
Microchip Technology Incorporated	2.68	0.13	0.18
Cadence Design Systems Inc.	2.67	0.17	0.28
Atlassian Corp Class A	2.33	0.00	0.12
Total	32.48	9.71	16.47

Top 10 Industries			
	Portfolio %	Bench 1 %	Bench 2 %
Software	23.71	9.44	16.59
Semiconductors	14.54	6.43	8.57
Biotechnology	8.76	2.31	3.33
It Services	7.40	1.20	1.95
Financial Services	7.03	4.29	3.83
Broadline Retail	6.94	2.79	4.55
Life Sciences Tools	4.68	1.84	1.22
Health Care Equip	3.97	2.84	2.26
Hotels Rest & Leisure	3.71	2.10	2.45
Containers & Packaging	2.21	0.26	0.20
Total	82.95	33.50	44.95

Market Capitalization		
		Portfolio %
Large	Above 25.0B	69.21
	10.0B - 25.0B	15.63
Mid	5.0B - 10.0B	6.42
	1.0B - 5.0B	5.29
Small	0.0 - 1.0B	3.45



Average Annual Returns

	3 Months	YTD	1 Yr.	3 Yr.	5 Yr.	10 Yr.	Since Inception	Inception Date
Harbor Disruptive Innovation ETF (NAV)	16.18%	16.18%	-23.35%	N/A	N/A	N/A	-29.15%	12/01/21
Harbor Disruptive Innovation ETF (Market)	16.19%	16.19%	-23.59%	N/A	N/A	N/A	-29.19%	12/01/21
S&P 500 Index	7.50%	7.50%	-7.73%	N/A	N/A	N/A	-5.25%	12/01/21
Russell 3000® Growth Index	13.85%	13.85%	-10.88%	N/A	N/A	N/A	-12.25%	12/01/21

MANAGER COMMENTARY

As of 03/31/2023

“While uncertainties remain, we believe innovative companies currently reflect attractive valuations, since many were devalued in last year’s bear market.”

Harbor Capital Advisors, Inc

Market in Review

Equities finished the first quarter of 2023 higher despite multiple, double-digit percentage swings in the indexes throughout the quarter. After stocks surged in January on the hopes of a more dovish U.S. Federal Reserve (“Fed”) and a soft-landing coming to pass, indexes reversed course in February as data revealed persistent inflation and hawkish Fed commentary. Then, almost 12 months into the tightening cycle, cracks emerged in the banking system that ultimately led to the collapse of Silicon Valley Bank. Investors flocked to perceived safe haven segments of the market, most notably into mega cap Tech, among others. Despite trading in tandem for much of the quarter, large caps diverged rather dramatically in March, outperforming small caps by a wide margin.

Portfolio Performance

During the quarter, the Harbor Disruptive Innovation ETF (“ETF”) returned 16.18%, outperforming its primary benchmark, the S&P 500 Index, which returned 7.50%, and the Russell 3000® Growth Index, which returned 13.85%.

The overweight to Information Technology added to relative performance, while underweights to the Financials, Energy, and Consumer Staples sectors also aided relative performance. Stock selection was a large driver of outperformance during the quarter.

Performance data shown represents past performance and is no guarantee of future results. Past performance is net of management fees and expenses and reflects reinvested dividends and distributions. Investment returns and principal value will fluctuate and when redeemed may be worth more or less than their original cost. Returns for periods less than one year are not annualized. Current performance may be higher or lower and is available through the most recent month end at harborcapital.com or by calling 800-422-1050.

Shares are bought and sold at market price not net asset value (NAV). A fund’s NAV is the sum of all its assets less any liabilities, divided by the number of shares outstanding. Market price returns are based upon the closing composite market price and do not represent the returns you would receive if you traded shares at other times.



Contributors & Detractors

Cadence Design Systems was among the top contributors to the Fund's performance during the quarter. The software company, an essential component of the semiconductor design process, rallied on strong fundamentals and renewed market optimism for the semiconductor industry.

Sea Limited was another top contributor during the quarter, as the company notched its first-ever profitable quarter at the group level, with sustained, strong revenue growth across gaming, e-commerce, and digital financial services.

Ascendis Pharma, a biotech company with an innovative technology platform with multiple, late-stage assets, was a top detractor from performance during the quarter. Despite preannouncing that its fourth quarter Skytrofa revenues met consensus expectations, the company disclosed ophthalmology as the next vertical for its TransCon technology, thereby disappointing investors who were anticipating a metabolic or endocrine vertical. Additionally, poor investor sentiment within the biotech space during the quarter weighed on the stock.

C4 Therapeutics, a biotech company, also detracted from the Fund's performance. The company announced it would review strategic priorities to advance its targeted protein-degradation medicines portfolio. In addition, at the beginning of February, the CMO's resignation weighed on the stock, leading to further pressure after underwhelming quarterly results.

Buys & Sells

We purchased 89bio during the quarter. 89bio, a biotech company focused on cardiometabolic disorders, was added in advance of the company's Phase 2B data release for a drug treating nonalcoholic steatohepatitis (NASH), which has an enormous, obesity-like total addressable market.

During the quarter, we sold the position in Alphabet on concerns about the company's search-based advertising model stemming from Microsoft's ChatGPT investment and its opportunities/advantages for Microsoft in the search business.

Outlook

The market appears to be digesting a more predictable interest rate regime and early signs that inflation may be coming under control. Interest rate policy will remain at the forefront, but it is encouraging to see the market favor growth and innovation — at least so far this year. We believe, as the year progresses, that the focus will continue to shift to an environment where company fundamentals matter. While uncertainties remain, we believe innovative companies currently reflect attractive valuations, since many were devalued in last year's bear market.



Best & Worst Performers

Best Performers	Average Weight %	Return % (NAV)
NVIDIA Corporation	0.90	90.10
Meta Platforms Inc. Class A	0.40	76.12
Tesla Inc.	0.91	68.42
Sea Ltd. (Singapore) Sponsored ADR Class A	0.93	66.35
Lantheus Holdings Inc	0.55	62.01

Worst Performers	Average Weight %	Return % (NAV)
Arrowhead Pharmaceuticals Inc.	0.48	-37.38
Replimune Group Inc.	0.53	-35.07
Repare Therapeutics Inc.	0.36	-33.11
Avidity Biosciences Inc	0.58	-30.83
Bicycle Therapeutics Plc Sponsored ADR	0.48	-28.14

Contributors & Detractors

Greatest Contributors	Return % (NAV)	Contribution to Return %
MercadoLibre Inc.	55.76	1.61
Lam Research Corporation	26.57	0.98
Cadence Design Systems Inc.	30.78	0.81
Workday Inc. Class A	23.43	0.80
Amazon.com Inc.	22.96	0.75
Total		4.96

Greatest Detractors	Return % (NAV)	Contribution to Return %
Arrowhead Pharmaceuticals Inc.	-37.38	-0.26
Replimune Group Inc.	-35.07	-0.20
Ascendis Pharma A/S Sponsored ADR	-12.21	-0.17
C4 Therapeutics Inc.	-46.78	-0.17
Repare Therapeutics Inc.	-33.11	-0.17
Total		-0.97

Harbor Disruptive Innovation ETF

ATTRIBUTION

As of 03/31/2023



Quarterly Attribution:
Harbor Disruptive Innovation Fund vs S&P 500 Index

Performance

	Portfolio	Benchmark	Active
Return Ex Currency	16.70	7.50	9.20
Currency Contribution	0.14	0.00	0.14
Total Return	16.84	7.50	9.35

Sector Attribution	Average Weight			Total Return			Contribution to Return		Attribution Analysis		
	Port. Avg. Wgt.	Bench. Avg. Wgt.	Variation in Avg. Wgt.	Port. Total Return	Bench. Total Return	Variation in Total Return	Port. Contribution To Return	Bench. Contribution To Return	Allocation Effect	Selection Effect	Total Effect
	Port. Avg. Wgt.	Bench. Avg. Wgt.	Variation in Avg. Wgt.	Port. Total Return	Bench. Total Return	Variation in Total Return	Port. Contribution To Return	Bench. Contribution To Return	Allocation Effect	Selection Effect	Total Effect
Information Technology	44.44	24.00	20.44	26.05	24.10	1.95	10.86	5.36	3.41	0.67	4.07
Financials	7.99	14.15	-6.16	13.94	-3.37	17.31	1.12	-0.49	0.72	1.48	2.20
Consumer Discretionary	11.41	9.93	1.48	37.20	16.80	20.41	3.90	1.55	0.15	2.04	2.19
Energy	0.00	4.90	-4.90	0.00	-4.67	4.67	0.00	-0.23	0.67	0.00	0.67
Consumer Staples	0.00	7.27	-7.27	0.00	0.86	-0.86	0.00	0.08	0.51	0.00	0.51
Industrials	0.57	8.88	-8.31	8.83	3.11	5.71	0.03	0.27	0.39	0.02	0.40
Real Estate	0.00	2.70	-2.70	0.00	1.95	-1.95	0.00	0.06	0.17	0.00	0.17
Materials	2.39	2.73	-0.35	8.15	4.29	3.86	0.23	0.13	0.02	0.09	0.11
Utilities	1.92	2.95	-1.03	-7.20	-3.24	-3.96	-0.15	-0.10	0.11	-0.09	0.02
Communication Services	6.78	7.79	-1.01	20.57	20.50	0.07	1.41	1.52	-0.09	-0.01	-0.10
Health Care	21.31	14.70	6.60	-3.70	-4.31	0.61	-0.59	-0.66	-0.93	0.23	-0.69
Total	100.00	100.00	0.00	16.84	7.50	9.35	16.84	7.50	4.92	4.43	9.35

Quarterly Attribution:
Harbor Disruptive Innovation Fund vs Russell 3000® Growth Index

Performance

	Portfolio	Benchmark	Active
Return Ex Currency	16.70	13.86	2.85
Currency Contribution	0.14	0.00	0.14
Total Return	16.84	13.86	2.99

Sector Attribution	Average Weight			Total Return			Contribution to Return		Attribution Analysis		
	Port. Avg. Wgt.	Bench. Avg. Wgt.	Variation in Avg. Wgt.	Port. Total Return	Bench. Total Return	Variation in Total Return	Port. Contribution To Return	Bench. Contribution To Return	Allocation Effect	Selection Effect	Total Effect
	Port. Avg. Wgt.	Bench. Avg. Wgt.	Variation in Avg. Wgt.	Port. Total Return	Bench. Total Return	Variation in Total Return	Port. Contribution To Return	Bench. Contribution To Return	Allocation Effect	Selection Effect	Total Effect
Consumer Discretionary	11.41	14.15	-2.74	37.20	20.49	16.71	3.90	2.79	-0.17	1.71	1.54
Information Technology	44.44	38.28	6.16	26.05	24.55	1.50	10.86	8.88	0.68	0.53	1.21
Industrials	0.57	9.30	-8.72	8.83	4.89	3.94	0.03	0.47	0.83	0.01	0.84
Consumer Staples	0.00	6.13	-6.13	0.00	2.24	-2.24	0.00	0.15	0.78	0.00	0.78
Financials	7.99	7.28	0.71	13.94	3.85	10.09	1.12	0.34	-0.08	0.85	0.77
Energy	0.00	1.85	-1.85	0.00	-8.04	8.04	0.00	-0.15	0.47	0.00	0.47
Real Estate	0.00	1.62	-1.62	0.00	1.91	-1.91	0.00	0.05	0.21	0.00	0.21
Materials	2.39	1.60	0.78	8.15	3.98	4.17	0.23	0.07	-0.08	0.10	0.02
Communication Services	6.78	6.74	0.04	20.57	20.85	-0.29	1.41	1.41	0.04	-0.04	-0.01
Utilities	1.92	0.15	1.77	-7.20	1.68	-8.88	-0.15	0.00	-0.24	-0.21	-0.45
Health Care	21.31	12.90	8.41	-3.70	-1.05	-2.65	-0.59	-0.15	-1.44	-0.52	-1.96
Total	100.00	100.00	0.00	16.84	13.86	2.99	16.84	13.86	0.57	2.42	2.99

Past performance is not a guarantee of future results.

Risks

Investing involves risk, principal loss is possible. Unlike mutual funds, ETFs may trade at a premium or discount to their net asset value. Harbor ETFs are new and have limited operating history to judge.

There is no guarantee that the investment objective of the Fund will be achieved. Stock markets are volatile and equity values can decline significantly in response to adverse issuer, political, regulatory, market and economic conditions. Since the Fund may hold foreign securities, it may be subject to greater risks than funds invested only in the U.S. Investing in REITs will subject the Fund to additional risk. Investing in international and emerging markets poses special risks, including potentially greater price volatility due to social, political and economic factors, as well as currency exchange rate fluctuations. These risks are more severe for securities of issuers in emerging market regions.

Companies that the adviser and sub-adviser believe create and capitalize on disruptive innovation and developing technologies to displace older technologies or create new markets may not in fact do so. Companies that initially develop a novel technology may not be able to capitalize on the technology. The Fund may invest in a company that does not currently derive any revenue from disruptive innovations or technologies, and there is no assurance that a company will derive any revenue from disruptive innovations or technologies in the future.

Benchmarks

The Russell 3000® Growth Index measures the performance of the broad growth segment of the US equity universe. It includes Russell 3000 Index companies with higher price-to-book ratios and higher forecasted growth values. It is market-capitalization weighted. The Standard & Poor's 500 Index is an unmanaged index generally representative of the U.S. market for large capitalization equities. These unmanaged indices do not reflect fees and expenses and are not available for direct investment. The Russell 3000® Growth Index and Russell® are trademarks of Frank Russell Company.

Disclosures

Expense ratio information is as of the Fund's current prospectus, as supplemented. Gross expenses are the Fund's total annual operating expense.

All holdings-related data is provided by FactSet. Because FactSet relies on external sources for its data, that data may differ slightly from actual values maintained by Harbor Funds.

Due to the security valuation procedures of the Fund and intra-day trading activity not included in the FactSet calculations, the actual returns may vary. From time to time the cash return in the portfolio may appear distorted based on the way FactSet's attribution calculation methodology addresses delayed settlements.

Best and Worst Performers sections reflect stocks in the portfolio for the quarter with an average weight of 0.25% or greater.

Views expressed herein are drawn from commentary provided to Harbor by the subadvisor and may not be reflective of their current opinions or future actions, are subject to change without prior notice, and should not be considered investment advice.

This information should not be considered as a recommendation to purchase or sell a particular security. The weightings, holdings, industries, sectors, countries, and returns mentioned may change at any time and may not represent current or future investments.

As a result of changing market conditions, total net asset levels, expenses and other statistics may change at any time and may differ from those shown.

The total amount shown for sector, industries, or country holdings may be greater than 100% because of the inclusion of derivatives and the collateral securities supporting those instruments.

Sector allocations are determined using the Global Industry Classification Standard (GICS), which is a service of Morgan Stanley Capital International (MSCI) and Standard & Poor's (S&P).

Investors should carefully consider the investment objectives, risks, charges and expenses of a fund before investing. To obtain a summary prospectus or prospectus for this and other information, visit harborcapital.com or call 800-422-1050. Read it carefully before investing.

Foreside Fund Services, LLC is the Distributor of the Harbor ETFs.

Attribution Disclosures

Linked Performance by Sectors data is produced from FactSet using data supplied by State Street Bank and Trust Company.

Active Currency Contribution is the Currency Contribution of the portfolio minus the Currency Contribution of the benchmark.

Allocation Effect is the portion of portfolio excess return that is attributable to taking different group bets from the benchmark. (If either the portfolio or the benchmark has no position in a given group, allocation effect is the lone effect.) A group's allocation effect equals the average percent capitalization of the portfolio's group minus the average percent cap of the benchmark's group times the total return of the benchmark group minus the total return of the benchmark.

Average Weight is the dollar value (price times the shares held) of the security or group, divided by the total dollar value of the entire portfolio displayed as a percentage. It is calculated as the simple arithmetic average of daily values.

Contribution to Return is the contribution of a security or group to the overall portfolio return. It is calculated as the security weight multiplied by the daily security return linked daily across the reporting period.

Currency Contribution is Total Return in USD subtracting out the Local Returns.

Local Returns are the Total Return of the portfolio or benchmark using the local currency.

Selection Effect is the portion of portfolio excess return attributable to choosing different securities within groups from the benchmark. A group's security selection effect equals the average weight of the benchmark's group times the total return of the portfolio's group minus the total return of the benchmark's group.

Total Effect is the sum of Allocation Effect and Selection Effect. The total effect represents the opportunity cost of what was done in a group relative to the overall portfolio. It is not just the difference between percent contribution in the portfolio and benchmark. At the overall portfolio level, the two numbers are equal. At the group level, they can be different.

Total Return is the price change of a security or group including dividends accrued over the report period (or the in-portfolio return) which includes only the time period that each security was in the portfolio.

Definitions

Median Market Cap: The median size of the companies in a portfolio or index as measured by the market value of outstanding shares.

Weighted Average Market Capitalization: The average size of the companies in a portfolio or index as measured by the market value of outstanding shares.

Earnings per share (EPS) is the portion of a company's profit allocated to each outstanding share.

% EPS Growth - Past 3 Year: Earnings per share refers to the bottom-line measure of a company's profitability defined as net income divided by the number of outstanding shares.

The Adjusted Trailing P/E (price-to-earnings) Ratio is the closing stock price divided by the sum of the last 12 months actual EPS.

Forecasted P/E Ratio: a measure of the P/E (price-to-earnings) ratio using forecasted earnings for the P/E calculation.

Return on Equity (ROE) is a measure of financial performance calculated by dividing net income by shareholders' equity.

The Price/Book (price-to-book) Ratio evaluates a firm's market value relative to its book value.

All P/E, ROE and P/B statistics are calculated as weighted medians.