

HARBOR OSMOSIS EMERGING MARKETS RESOURCE EFFICIENT ETF

Osmosis Investment Management

Subadvisor Since 12/11/2024

Ticker:	EFFE
CUSIP:	41151J737
Net Expense Ratio:	0.78%
Gross Expense Ratio:	0.78%
Total Net Assets:	\$106,238,887
Benchmark Name:	MSCI Emerging (ND) Markets Index

Portfolio Managers



Robbie Parker



Alex Stephen

Investment Philosophy

The Harbor Osmosis Emerging Markets Resource Efficient ETF (EFFE) focuses on creating compelling, alpha seeking portfolios by leveraging proprietary environmental data on carbon, water, and waste efficiency. This approach aims to deliver consistent, quality returns while reducing environmental impact, making it a compelling choice for long-term investors.

CHARACTERISTICS & ALLOCATION

As of 03/31/2025

Portfolio Characteristics		
	Portfolio	Benchmark
Number of Holdings	77	1,206
Wtd Avg Market Cap (\$Mil)	60,957.30	158,255.80
Median Market Cap (\$Mil)	13,193.00	8,852.00
Price/Book Ratio	2.21	3.00
Adjusted Trailing P/E Ratio	13.80	18.50
% EPS Growth - Past 3 Yr	13.90	13.70
Est 3-5 Yr EPS Growth Rate (%)	9.40	13.20
Return on Equity (%)	15.77	16.50
Forecasted P/E Ratio	11.80	15.20

Top 10 Holdings		
	Portfolio %	Benchmark %
iShares MSCI India ETF	16.99	0.00
TIM S.A.	3.87	0.03
Kia Corporation	3.43	0.19
MediaTek Inc	3.16	0.81
Xiaomi Corp. Class B	3.14	1.33
Asustek Computer Inc.	3.09	0.16
JD.com Inc. Class A	3.08	0.64
Lenovo Group Limited	2.97	0.14
Bank of China Limited Class H	2.72	0.55
Tencent Music Entertainment	2.68	0.14
Total	45.13	3.99

Top 10 Industries		
	Portfolio %	Benchmark %
Banks	33.28	18.48
Tech Hardware Storage	10.49	5.33
Communication Services	7.04	1.66
Semiconductors	5.83	11.58
Automobiles	4.75	3.35
Hotels Rest & Leisure	3.37	2.73
Passenger Airlines	3.15	0.41
Broadline Retail	3.08	5.92
Oil Gas & Consumable	2.96	4.38
Metals & Mining	2.90	3.52
Total	76.85	57.36

Economic Sectors		
	Portfolio %	Benchmark %
Financials	36.54	24.39
Information Technology	18.75	21.62
Consumer Discretionary	11.29	14.56
Communication Services	11.03	10.29
Industrials	5.07	6.26
Materials	4.03	5.82
Consumer Staples	3.90	4.70
Energy	2.96	4.48
Utilities	2.58	2.62
Health Care	2.30	3.32
Real Estate	1.42	1.67

Top 10 Countries		
	Portfolio %	Benchmark %
China	30.65	29.89
Taiwan	17.17	16.85
United States	16.99	0.03
South Korea	8.45	9.04
Brazil	4.72	4.41
Saudi Arabia	4.13	4.08
South Africa	3.12	3.16
Mexico	1.89	1.87
Thailand	1.64	1.19
Malaysia	1.45	1.33
Total	90.21	71.85
Emerging Markets	82.93	99.73

Market Capitalization		
		Portfolio %
Large	Above 25.0B	32.51
	10.0B - 25.0B	24.06
Mid	5.0B - 10.0B	35.84
	1.0B - 5.0B	7.46
Small	0.0 - 1.0B	0.00



Harbor Osmosis Emerging Markets Resource Efficient ETF



PERFORMANCE

As of 03/31/2025

Average Annual Returns

	3 Months	YTD	1 Yr.	3 Yr.	5 Yr.	10 Yr.	Since Inception	Inception Date
Harbor Osmosis Emerging Markets Resource Efficient ETF (NAV)	3.58%	3.58%	N/A	N/A	N/A	N/A	2.65%	12/18/2024
Harbor Osmosis Emerging Markets Resource Efficient ETF (Market)	4.71%	4.71%	N/A	N/A	N/A	N/A	3.55%	12/18/2024
MSCI Emerging (ND) Markets Index	2.93%	2.93%	N/A	N/A	N/A	N/A	1.13%	12/18/2024

MANAGER COMMENTARY

As of 03/31/2025

“European markets performed well, buoyed by fiscal stimulus aimed at boosting growth and defense spending in response to U.S. threats to withdraw military funding.”

Osmosis Investment Management

Market in Review

The first quarter of 2025 was characterized by sharp market volatility and uncertainty, largely driven by President Trump’s aggressive trade policies. Tariffs took center stage, with sweeping measures targeting imports from key trade partners including Mexico, Canada, and China, as well as specific industries such as steel, aluminum, and automobiles. These policies unraveled the previously optimistic “Trump trade,” pushing markets into correction territory and fueling fears of a potential U.S. recession.

Interestingly, while U.S. equities struggled, particularly Information Technology stocks, the rest of the global picture was quite positive. European markets performed well, buoyed by fiscal stimulus aimed at boosting growth and defense spending in response to U.S. threats to withdraw military funding.

One of the most striking policies during the early months of the Trump administration has been the aggressive rollback of climate-focused regulations and initiatives. President Trump withdrew the United States from the Paris Agreement, froze billions in green infrastructure funding, and defunded climate science programs. These actions have posed significant short-term challenges for the sustainable investing movement, particularly within the U.S., as the administration has prioritized fossil fuel expansion and bolstered oil and gas investments.

By dismantling policies aimed at reducing corporate emissions and environmental impacts, Trump’s approach continues to obscure and distract from the physical and economic reality of climate change. This short-term disruption has undermined investor confidence and continues to complicate efforts to advance environmentally responsible investing. The economic and geopolitical tensions of the quarter weighed on the MSCI World Index, which fell by 1.79%.

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.

Harbor Osmosis Emerging Markets Resource Efficient ETF



MANAGER COMMENTARY

As of 03/31/2025

Portfolio Performance

During the first quarter, the Osmosis Emerging Markets Resource Efficient ETF ("Fund") returned 3.58% (NAV), outperforming the benchmark, the MSCI Emerging Markets (ND) Index, which returned 2.93%.

Positive performance was driven by stock selection, within all three regions, with the majority originating from Asia-Pacific, followed by Latin America, and then Europe, the Middle East, and Africa. Positive performance was partially offset by a negative contribution from the allocation effect.

At the sector level, Information Technology and Financials sectors contributed positively to performance, while Consumer Discretionary and Industrials were negative.

Contributors and Detractors

At the individual stock level, the Fund's overweight allocation to Xiaomi Corp. positively impacted performance, as its share price increased by 42% during the quarter. The surge in Xiaomi's share price was driven by investor enthusiasm surrounding the company's plans for electric vehicles. Conversely, not holding Alibaba Group in the Fund detracted from performance. Alibaba's shares rose by 55% during the quarter, following the release of a positive earnings report and management's commitment to a significant investment in artificial intelligence.

Buys and Sells

Securities are bought and sold to help attain the Fund's objective: achieving superior risk-adjusted returns by targeting maximum resource efficiency in a concentrated, highly active risk portfolio, which replicates the sector and country exposure of the underlying benchmark. The selection universe for the portfolio is restricted to those disclosing companies that reside within the top tercile of their sector based purely on their resource efficiency (RE). Companies in the Financials and REITs sectors (unless classified differently under Osmosis sectors) are not included in the RE universe. The Fund is rebalanced on a monthly basis.

Sector Underweights and Overweights

Osmosis portfolios are managed to be sector and industry neutral. This means that sector and industry allocations in the portfolio will be close to the respective weighting in the benchmark. At each rebalance, our portfolio construction process allows sector and industry allocations to deviate from benchmark weighting by plus or minus 1%.

Country Allocations

Osmosis portfolios are managed to be country, currency, and region neutral. This means that country, currency, and region allocations will be close to the respective weighting in the benchmark. At each rebalance, our portfolio construction process allows country, currency, and region allocations to deviate from benchmark weighting by plus or minus 1%.

Outlook

During the quarter, markets continued to disregard the positive characteristics that the RE factor identifies. The concerns around global trade, disruption to traditional country alliances, and uncertainty as to the future have taken center stage. As these themes are resolved, there may be a return to the profitability delivered by sustainable business practices.

Osmosis believes the opportunity remains for companies with quality management teams and lower leverage — that are efficient in using natural resources to achieve economic value — to outperform their more resource-intensive peers.

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. Past performance reflects the beneficial effect of any expense waivers or reimbursements, without which returns would have been lower. 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.

Harbor Osmosis Emerging Markets Resource Efficient ETF



QUARTERLY ATTRIBUTION

As of 03/31/2025

Best & Worst Performers

Best Performers	Average Weight %	Return %
XIAOMI CORPORATION CLASS B	3.74	42.38
KOMERCNI BANKA, A.S.	0.17	38.34
BANCOLOMBIA SA BANCOLOMBIA PFD	0.16	35.16
TIM S.A.	3.30	34.62
PKO BANK POLSKI SA	0.90	34.03

Worst Performers	Average Weight %	Return %
WIWYNN CORPORATION	0.77	-38.38
EMEMORY TECHNOLOGY, INC.	1.12	-33.04
GLOBAL UNICHIP CORP.	1.65	-23.76
PT BANK MANDIRI (PERSERO) TBK	0.05	-16.04
ADVANCED PETROCHEMICAL CO.	0.04	-14.49

Contributors & Detractors

Greatest Contributors	Return %	Contribution to Return %
Xiaomi Corporation Class B	42.38	1.31
TIM S.A.	34.62	0.94
Tencent Music Entertainment Group	26.96	0.59
Bank of China Limited Class H	21.56	0.45
Arca Continental SAB de CV	25.89	0.33
Total		3.62

Greatest Detractors	Return %	Contribution to Return %
GLOBAL UNICHIP CORP.	-23.76	-0.43
EMEMORY TECHNOLOGY, INC.	-33.04	-0.35
WIWYNN CORPORATION	-38.38	-0.33
ISHARES MSCI INDIA ETF	-2.20	-0.27
EVA AIRWAYS CORPORATION	-9.71	-0.24
Total		-1.62

Harbor Osmosis Emerging Markets Resource Efficient ETF



ATTRIBUTION

As of 03/31/2025

Quarterly Attribution:

Harbor Osmosis Emerging Markets Resource Efficient ETF vs. MSCI Emerging (ND) Markets Index

Performance

	Portfolio	Benchmark	Active
Return Ex Currency	3.25	2.65	0.60
Currency Contribution	0.41	0.28	0.13
Total Return	3.66	2.93	0.73

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	20.29	23.89	-3.60	2.79	-8.83	11.62	-0.06	-2.05	0.78	1.59	2.37
Communication Services	8.89	9.77	-0.87	23.91	12.70	11.21	1.86	1.18	-0.08	0.83	0.75
Consumer Staples	3.60	4.66	-1.06	14.95	1.95	13.00	0.43	0.08	0.04	0.34	0.38
Energy	2.84	4.44	-1.60	4.18	2.49	1.70	0.10	0.11	0.07	0.02	0.08
Real Estate	1.28	1.62	-0.34	2.44	0.87	1.57	0.03	0.01	0.00	0.03	0.03
Utilities	2.35	2.57	-0.22	0.18	1.17	-0.99	0.01	0.02	0.03	-0.03	0.00
Financials	34.45	23.69	10.77	4.10	5.75	-1.65	1.45	1.34	0.37	-0.37	0.00
Materials	3.92	5.76	-1.85	9.05	9.32	-0.27	0.35	0.52	-0.05	-0.03	-0.08
Health Care	2.13	3.36	-1.23	-9.44	0.97	-10.41	-0.26	0.03	0.03	-0.30	-0.26
Industrials	5.47	6.42	-0.95	-8.66	0.22	-8.88	-0.49	0.01	0.03	-0.50	-0.47
Consumer Discretionary	10.74	13.82	-3.08	0.68	13.10	-12.42	0.09	1.67	-0.38	-1.11	-1.49
Total	100.00	100.00	0.00	3.66	2.93	0.73	3.66	2.93	0.26	0.47	0.73

Performance data shown represents past performance and is no guarantee of future results.

Harbor Osmosis Emerging Markets Resource Efficient ETF



ATTRIBUTION

As of 03/31/2025

Quarterly Attribution:

Harbor Osmosis Emerging Markets Resource Efficient ETF vs. MSCI Emerging (ND) Markets Index

Country 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
India	1.26	17.98	-16.71	2.06	-2.95	5.02	0.01	-0.65	1.08	0.05	1.13
Taiwan	17.42	19.06	-1.64	-9.89	-12.63	2.74	-1.62	-2.39	0.63	0.41	1.04
Brazil	4.37	4.32	0.05	27.50	14.05	13.46	1.02	0.59	0.00	0.48	0.48
Thailand	1.41	1.30	0.12	9.75	-13.69	23.44	0.12	-0.19	0.00	0.34	0.34
Mexico	1.83	1.83	0.00	23.81	8.57	15.24	0.35	0.16	0.01	0.22	0.21
Saudi Arabia	4.00	4.09	-0.09	4.34	1.68	2.67	0.20	0.08	0.03	0.12	0.15
Malaysia	1.43	1.42	0.01	2.84	-6.01	8.84	0.03	-0.09	0.01	0.13	0.14
South Africa	2.99	3.05	-0.06	16.58	13.84	2.75	0.47	0.40	0.00	0.09	0.08
Poland	0.98	0.94	0.04	38.52	31.27	7.26	0.30	0.25	0.00	0.06	0.05
Turkey	0.49	0.64	-0.15	-2.48	-8.96	6.48	-0.01	-0.05	0.00	0.04	0.05
Czech Republic	0.19	0.15	0.04	39.80	28.66	11.14	0.06	0.04	0.01	0.01	0.02
Greece	0.55	0.51	0.04	27.14	23.44	3.71	0.13	0.11	0.00	0.02	0.02
Chile	0.47	0.45	0.03	21.89	17.81	4.08	0.09	0.07	0.01	0.01	0.02
Qatar	0.61	0.81	-0.20	0.13	-1.16	1.29	0.01	-0.01	0.02	0.00	0.02
Hungary	0.30	0.27	0.03	22.72	17.99	4.73	0.06	0.04	0.00	0.01	0.02
Colombia	0.16	0.11	0.04	35.16	33.27	1.89	0.04	0.03	0.01	0.00	0.01
Philippines	0.49	0.49	-0.01	-1.68	-0.64	-1.05	-0.01	-0.01	0.00	0.00	0.00
United Arab Emirates	1.62	1.41	0.22	4.21	4.77	-0.56	0.04	0.07	0.02	-0.02	-0.01
Egypt	0.09	0.07	0.02	-2.48	5.13	-7.61	-0.00	0.00	-0.01	0.00	-0.01
Peru	0.29	0.29	0.00	1.55	5.38	-3.83	0.01	0.02	0.00	-0.01	-0.01
Indonesia	1.35	1.34	0.01	-12.94	-11.20	-1.74	-0.18	-0.16	0.01	-0.02	-0.01
Kuwait	0.21	0.78	-0.56	-1.38	11.38	-12.75	-0.01	0.08	-0.07	-0.01	-0.08
Ireland	0.00	1.00	-1.00	0.00	22.02	-22.02	0.00	0.20	-0.17	0.00	-0.17
United States	16.26	0.03	16.22	-2.20	4.27	-6.48	-0.27	0.00	0.87	-1.51	-0.64
China	28.34	28.25	0.10	13.51	14.81	-1.30	3.08	3.87	-0.25	-0.44	-0.69
South Korea	8.86	9.43	-0.58	-4.69	4.92	-9.61	-0.41	0.46	0.00	-0.85	-0.84
Cash	4.04	0.00	4.04	3.08	0.00	3.08	0.14	0.00	-0.58	0.00	-0.58
Total	100.00	100.00	0.00	3.66	2.93	0.77	3.66	2.93	0.47	0.26	0.20

Performance data shown represents past performance and is no guarantee of future results.

Harbor Osmosis Emerging Markets Resource Efficient ETF



IMPORTANT INFORMATION

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. Large cap stocks may underperform compared to small or mid cap stocks, which may lead the Fund to lag behind funds focused on smaller caps, while mid cap stocks carry added risks like illiquidity and higher volatility than those of large companies. The Fund's investments in foreign securities, particularly emerging markets, expose it to higher risks than funds investing only in the U.S., including currency risk, which may negatively impact its value if foreign currencies fluctuate against the U.S. dollar. There is no guarantee that the Subadvisor's resource efficiency strategy will accurately provide exposure to resource efficient companies and the Fund may outperform or underperform other funds that invest in similar asset classes but employ different investment styles. The Subadvisor relies on company data for Resource Efficiency Scores but can't guarantee its accuracy or completeness, especially in emerging markets. The Fund utilizes a quantitative model and there are limitations in every quantitative model. There can be no assurances that the strategies pursued or the techniques implemented in the quantitative model will be profitable, and various market conditions may be materially less favorable to certain strategies than others.

ETFs are subject to capital gains tax and taxation of dividend income. However, ETFs are structured in such a manner that taxes are generally minimized for the holder of the ETF. An ETF manager accommodates investment inflows and outflows by creating or redeeming "creation units," which are baskets of assets. As a result, the investor usually is not exposed to capital gains on any individual security in the underlying portfolio. However, capital gains tax may be incurred by the investor after the ETF is sold.

Benchmarks

The MSCI Emerging Markets (ND) Index is a market capitalization weighted index of equity securities in more than 20 emerging market economies. This unmanaged index does not reflect fees and expenses and is not available for direct investment.

Disclosures

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

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.

Harbor Osmosis Emerging Markets Resource Efficient ETF



IMPORTANT INFORMATION

Attribution Disclosures

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

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.

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

Alpha is a measure of risk (beta)-adjusted return.

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.

The Est 3-5 Yr EPS Growth (%) is the estimated growth of earnings per share over the next 3-5 years, using pre-calculated mean long-term EPS growth rate estimates, which are calculated using each individual broker's methodology, from FactSet, First Call, I/B/E/S Consensus, and Reuters. Forward looking estimates may not come to pass.

% 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.