Bloomberg Ticker: BHS40TR Index Reuters Ticker: .BHS40TR

# SELECT 40 LARGE-CAP DEFENSIVE EQUITY - ALL WEATHER INVESTMENT STRATEGY FACT SHEET

#### Introduction

Boston Harbor's mission is to preserve and grow our clients' capital. We achieve our mission by creating investment strategies that meet the goals of preservation of capital, total return, and liquidity. We seek to identify companies that have a high probability of sustainable and growing earnings. Boston Harbor is differentiated from other asset managers in that the cornerstone of our investment philosophy is based on an observation from William F. Sharpe.

William F. Sharpe, 1990 Nobel Prize winner for his theory of risk and return, precisely states our belief about the work to be done before offering any investment strategy to our clients:

"Although it is always perilous to assume that the future will be like the past, it is at least instructive to find out what the past was like."

We use our proprietary **Microeconomic Theory of the Firm** to create validated investment strategies based primarily on negative stock selection. We red-flag the high probability losers and remove them from the stock selection universe leaving companies that our analysis indicates have a high probability of sustainable earnings. The resulting SELECT 40 portfolios are described by (but not selected by) systemic factors: Large-Cap, Growth/Value, Low Volatility/Beta, Quality, and High Active Share. Holdings Based Style Analysis reports a Growth/Quality tilt and Returns Based Style Analysis reports a changing Growth/Value tilt. All of our strategies demonstrate to our clients hypothetical performance over at least 20 years of market cycles using a disciplined scientific methodology to analyze the historical fundamental data. SELECT 40 is the platform for a Family of Long, Long Levered, Long Hedged Dynamic Alpha Risk Control and Private Equity Replication products.

## **About the Strategy**

SELECT 40's objective is to outperform the S&P 500® Total Return Index (TR) long-term with low volatility-risk and low beta-risk and by doing so to preserve and grow our clients' capital. SELECT 40 Total Return (TR) portfolios (40 U.S. Large-Cap stocks) have attained that goal. For the twenty years ended December 31, 2022 SELECT 40TR outperformed the S&P 500TR by 14.0% (Net) with 20.9% less volatility-risk. SELECT 40TR only invests in large market capitalization, transparent, and highly liquid stocks selected from the U.S. Large-Cap universe.

### **SELECT 40 2022 Portfolio Profile:**

As of 12/31/2022	Select 40TR	S&P 500TR
Average Mkt Cap	\$153.2B	\$70.2B
Median Mkt Cap	\$40.8B	\$29.6B
Dividend Yield	1.79%	1.74%
Active Share	86 1%	0

Contrary to basic finance principles, high-beta and high-volatility stocks have long underperformed low-beta and low-volatility stocks. Over 1968-2008, low-volatility and low-beta portfolios offered an enviable combination of high average returns and small drawdown's. This outcome runs counter to the fundamental principle that risk is compensated with higher expected return<sup>1</sup>.

We believe that our large-cap low-volatility low-beta strategy, based on systematic traditional fundamental financial statement analysis, can continue to deliver higher than market returns at lower than market risk for our clients.

All the statistics in this fact sheet are hypothetical to avoid mixing hypothetical and live composite returns. Since April 2013 live composite returns are available upon request. The tracking error for live returns vs. hypothetical returns is 0.23% annually based on a 9.8 year comparison<sup>2</sup> to December 31, 2022.

The protocol for the scientific SELECT 40TR study was based on SEC historical study precedents under the Investment Advisors Act of 1940 and the study has been audited<sup>3</sup>.

<sup>&</sup>lt;sup>1</sup>Baker Malcolm, Brendan Bradley and Jeffrey Wurgler, "Benchmarks Limits to Arbitrage: Understanding the Low Volatility Anomaly," Financial Analyst Journal, Volume 67, Number 1, 2011 CFA Institute

<sup>&</sup>lt;sup>2</sup>SELECT 40 Back-Test Protocol And Test Returns vs. Live Returns As Predictors Of Future Performance White Paper. See Resources at bostonharborim.com

<sup>&</sup>lt;sup>3</sup>SELECT 40 hypothetical returns from April 1, 1990 to September 30, 2016 plus our systematic **Microeconomic Theory of the Firm** ("Model") for stock selection have been <u>audited</u> by Ashland Partners & Company LLP the leading Global GIPS<sub>®</sub> due diligence and verification firm for the financial services industry. The Ashland Audit Report was issued December 8, 2016



The SELECT 40TR return and risk statistics presented in this fact sheet are characterized by absolute returns and less risk. Less risk is demonstrated by strong capital preservation in down markets and strong absolute returns in up markets. A less risky portfolio must automatically provide some insurance when bad things happen to the market to protect capital and set the stage for long-term outperformance.

Boston Harbor's SELECT 40TR low-volatility low-beta portfolio has provided that insurance. Historically, the Strategy outperforms the S&P 500TR long-term over market cycles. For the 20 years ended December 31, 2022 SELECT 40TR annualized return (Net) 11.17% as compared to the S&P 500TR 9.80% and annualized volatility-risk respectively 11.7% and 14.8%.

### **Investment Philosophy**

At Boston Harbor, we believe that large market capitalization companies constitute an excellent investment selection universe. To be included in our universe, companies have to possess both competitive advantages and the financial resources to survive difficult economic cycles. We believe that the market is reasonably efficient in setting the share prices of such securities, so we do not attempt to challenge individual market valuations.

Instead, we carefully analyze financial statements to identify those companies that have fundamentals characteristics that indicate to us a likelihood of performing better than the expectations embedded in their market price. We use this unique, proprietary, analytical process to select portfolios of large-cap low volatility and low beta stocks that, over the past ~36 years, have outperformed the S&P 500TR.

### **Investment Strategy**

We use a proprietary **Microeconomic Theory of the Firm** ("Theory" or "Model") to perform fundamental, bottoms-up, forensic analysis of the company using commercial SEC Form 10-K data. The Theory is quantitative (rules implemented by computer), simple (easy to define and to understand), and repeatable.

The Strategy is systematic, stock selection criteria are reliably and consistently applied, and is not subject to

any qualitative judgment overlays. Importantly, because portfolio selection is not dependent on any person, the Strategy will survive any changes in management without any investment strategy drift.

The Theory's algorithms identify well-managed, healthy, companies that have a high probability of sustainable earnings by reporting no red-flags for any of the company's key economic drivers of future profits. In addition to passing the no-red flags test, to be selected for a Strategy portfolio a company must have a margin of safety rate of return on equity greater than its required cost of equity capital.

The Theory's algorithms primarily analyze the key drivers of future profits and identify fundamental change relationships that could have a negative impact on earnings expectations embedded in the market price. We red-flag those negative impact companies to keep them out of the portfolio: negative stock selection. If our investment process does not select a stock in any given year that does not mean that the stock will not increase in price. It only means that the company's financial statements accumulate red-flags upon review by our selection criteria and indicate a risk we are not willing to assume.

## **Strategy Invention and Development**

The Strategy and its variations were invented using the two-step scientific method. The first step (initially developed circa 1969) was to develop the hypothesis for the **Microeconomic Theory of the Firm** to identify well-managed, healthy, companies that have a high probability of sustainable earnings and are likely to outperform in the short-term to medium-term.

The second step (2008) was to test that hypothesis against a Large-Cap commercial fundamentals database. A highly respected global firm of mathematicians was engaged to incorporate the rules, which defined the hypothesis, into software algorithms. This firm independently operated the software to perform the stock selection tests that validated the Theory. Since 2008, this firm has continued to operate the software to select Boston Harbor's portfolios. By following this procedure this firm independently confirms annually the integrity of our process.



## **Strategy Defined By Systemic Factors**

SELECT 40 portfolios can be described by (but are not selected by) systemic factors: Large-Cap, Low Volatility/Beta, Quality, and High Active Share. Holdings Based Style Analysis ("HBSA") reports a Growth/Quality tilt compared to the S&P 500 Index and Returns Based Style Analysis ("RBSA") reports a Growth tilt as compared to the Russell 1000<sup>5</sup>.

Our Theory universe consists of large-cap stocks, but the factors other than large-cap universe are generated by the investment process. An HBSA report<sup>6</sup> January 2002 to November 2014 presents a profile of the average Quality Factor as compared to the S&P 500 Index: high rate of return on equity, high earnings growth, high sustainable growth, low debt to equity, and high corporate governance-GMI.

The RBSA analyzes styles as compared to the Russell 1000 and shifts from Value to Growth depending on macroeconomic conditions. In the 2008-2009 market crash the Strategy style allocation at March 2008 was 58% Citigroup 3-month T-bill allocation, 15% Russell 1000 Growth allocation, and 27% Russell 1000 Value allocation.

Although there was a 58% cash attribution to SELECT 40TR at the beginning of the 2008 market crash, the Strategy remained 100% invested in its equity portfolio. The RBSA Chart on page 8 shows the crash attributes.

# 2008 & 2023 Financial Crisis and Warren Buffett's Airlines

When the 2008 financial crisis began, Merrill Lynch, Bear Stearns, Lehman Brothers, American International Group, Washington Mutual, and others were absent from our portfolios because the Strategy rated those firms no buys for 2008. This was a good result. In 2023 the Strategy did not purchase any banks.

The Strategy by not selecting a stock is raising a possible red flag, which automatically eliminates a stock from the portfolio and thereby keeps potential losers out of the portfolio. For example, Enron was not rated a buy based on Enron's SEC Form 10-K for December 31, 2000. The stock was \$83.125 on December 31, 2000 and \$0.60 on December 31, 2001 for a loss of 99.28%.

SELECT 40 rarely purchases airline stocks.

Nevertheless, SELECT 40 in March 2016 purchased
Delta Airlines and Southwest Airlines several months
ahead of Warren Buffett. Berkshire Hathaway's Q-3
SEC Form 13F disclosed surprising purchases of three
airline stocks. The three airline stocks were American
Airlines, Delta Airlines and United Continental Holdings
Inc. In November Warren Buffett disclosed he
purchased Southwest Airlines after filing Q-3 13F.
Buffett has traditionally detested airline stocks,
famously saying in 2002, "If a capitalist had been
present at Kitty Hawk back in the early 1900s, he
should have shot Orville Wright."

We conclude that Warren Buffett agreed with SELECT 40's analysis of two of his four airline stocks.

### **Tax Efficiency**

SELECT 40 portfolios are rebalanced annually and portfolio turnover averages 70%. For taxable accounts, tax harvesting is possible to arrange by taking short-term losses one day before and capital gains one day after the end of the one year holding period, which strategy could result in higher tax efficiency.

### **Investment Capacity**

SELECT 40 has an investment capacity estimated at \$20 billion that can be expanded to other equity universes. The total capitalized value of the 2022 SELECT 40 portfolio as of December 31, 2022 is estimated at \$6.1 trillion.

### **Money Management**

The investor can invest directly in the Strategy in a separate managed account. The investor will have direct ownership of the account and direct access to the account. A contract between Boston Harbor and the investor will precisely define the investment strategy for the account. SELECT 40 is also available by Index license and global bank equity swaps for qualified investors.

<sup>&</sup>lt;sup>4</sup> Zephyr StyleADVISOR Analysis January 2020

<sup>&</sup>lt;sup>5</sup> Nominal Percentages of Russell 2000 Growth and Value added to Russell 1000 to make the discussion simpler

<sup>&</sup>lt;sup>6</sup> Style Research Analysis January 2015



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risks of using the Strategy in a different time period or the financial risk of executing trades in a live portfolio which include the potential market impact on stock prices caused by buying or selling that could cause the model's buy or sell prices to differ from the frictionless trades of the back-tested model.

Although the information presented gives you some idea of the risks involved in investing in the Strategy, PAST HYPOTHETICAL PERFORMANCE IS NOT A GUARANTEE OR A RELIABLE INDICATOR OF FUTURE RESULTS. All investments contain risks and may lose value.

# DISCLAIMER FOR HYPOTHETICAL RETURNS

SELECT 40TR returns from April 1, 1990 to September 30, 2016 are audited returns<sup>7</sup>. Only SELECT 40TR hypothetical returns for ~36 years ended December 31, 2022 are reported to avoid mixing hypothetical and composite live returns. Since April 1, 2013 SELECT 40TR composite live returns are available upon request and have a tracking error to hypothetical returns of 0.23%. Hypothetical returns from March 31, 2008 to March 31, 2013 are not back-tested, but are not live portfolios.

All hypothetical returns are gross, unless otherwise indicated, of advisory fees and transaction costs; all dividends are assumed to be reinvested annually. Actual Strategy returns from live portfolios may differ materially from hypothetical returns. There is no substitute for actual returns from a live portfolio.

Back-testing is done by retroactively applying a hypothesis to the historical data to obtain returns (scientific method - used by Boston Harbor) or finding variables in historical data that correlate to returns and developing a hypothesis from the historical data (data mining) or applying any hypothesis to different time periods until favorable returns are discovered (data mining).

Back-tested models are developed with the benefit of hindsight but might not have foresight of the future. Hypothetical returns do not reflect the macroeconomic

<sup>&</sup>lt;sup>7</sup>See Ibid #3

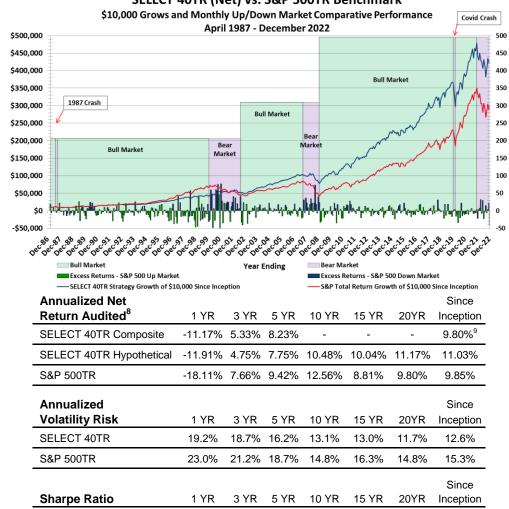
**Total Return (TR) Performance** 36 Calendar Year **Annual Net Returns** 4/1/1987 to 12/31/2022

4/1/1987 to 12/31/2022						
	SELECT 40TR	S&P 500TR				
2022	<mark>-11.91%</mark>	<mark>-18.11%</mark>				
2021	22.54%	28.71%				
2020	6.48%	18.40%				
2019	24.30%	31.49%				
2018	1.66%	<del>-4.38%</del>				
2017	21.58%	21.83%				
2016	5.12%	11.96%				
2015	1.34%	1.38%				
2014	14.29%	13.69%				
2013	25.90%	32.39%				
2012	13.47%	16.00%				
2011	13.93%	2.11%				
2010	12.62%	15.06%				
2009	23.25%	26.46%				
2008	<mark>-13.81%</mark>	<del>-37.00%</del>				
2007	6.25%	5.49%				
2006	12.97%	15.79%				
2005	11.99%	4.91%				
2004	18.55%	10.88%				
2003	24.27%	28.68%				
2002	<del>-7</del> .82%	<mark>-22.10%</mark>				
2001	<mark>-0.61%</mark>	<mark>-11.89%</mark>				
2000	22.86%	<mark>-9.10%</mark>				
1999	8.51%	21.04%				
1998	15.85%	28.58%				
1997	28.06%	33.36%				
1996	18.46%	22.96%				
1995	23.60%	37.58%				
1994	6.01%	1.32%				
1993	0.82%	10.08%				
1992	6.51%	7.62%				
1991	27.95%	30.47%				
1990	1.85%	<del>-3.10%</del>				
1989	33.73%	31.69%				
1988	8.40%	16.61%				
*1987	<del>-</del> 10.98%	<del>-13.27%</del>				
*(9 Montl	ns)					

<sup>\*(9</sup> Months) Years ending 12/31/2022 Since inception 3/31/1987

# <sup>9</sup> Inception SELECT 40TR Composite March 31, 2013

### **Audited Hypothetical Performance** SELECT 40TR (Net) vs. S&P 500TR Benchmark



# Maximum Equity Drawdown and Peak to Peak Recovery Time Comparison SELECT 40 vs. S&P 500TR

0.40

0.43

0.74

0.80

0.72

0.50

0.85

0.58

0.65

0.45

-0.73

-0.88

0.21

0.32

	Maximum Peak-to-Trough Decline	Peak-to-Peak Duration Months	Start Date	End Date
Event: 2000	Tech Bubble	•		•
S&P 500TR	-44.7%	75	Aug-00 Mar-02	Oct-06
SELECT 40TR	-18.1%	19	Mar-02	Oct-03
Event: 2008 I	Financial Collapse	-	•	•
S&P 500TR	-50.9%	58	Oct-07 May-08	Aug-12
SELECT 40TR	-27.2%	19	May-08	Dec-09
<b>Event: Covid</b>	-19 Crash		_	_
S&P 500TR	-19.6%	7	Jan-20	Jul-20
SELECT 40TR	-19.1%	11	Jan-20	Nov-20

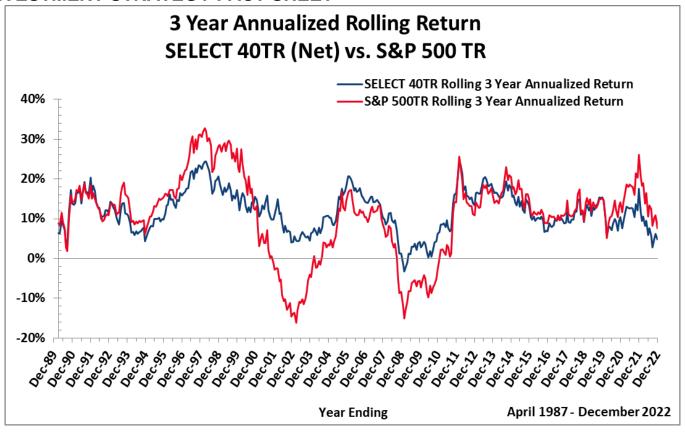
SELECT 40 AUDITED RETURNS (IBID #3) ARE HYPOTHETICAL WITH DIVIDENDS REINVESTED NET OF FEES AND TRANSACTION COSTS SINCE APRIL 1, 2013 SELECT 40 COMPOSITE LIVE RETURNS ARE AVAILABLE UPON REQUEST

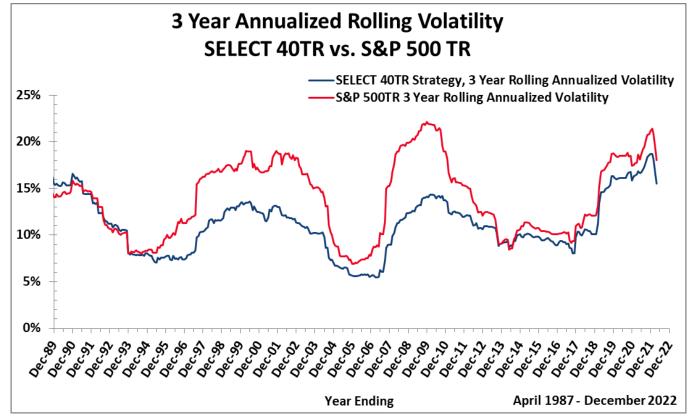
SELECT 40TR

**S&P 500TR** 

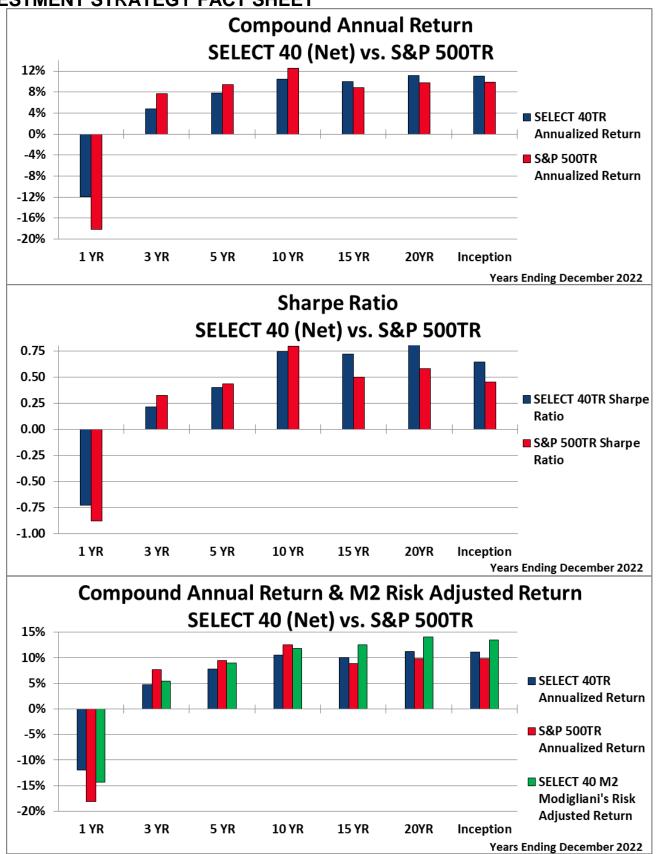
<sup>8</sup> See Ibid #2



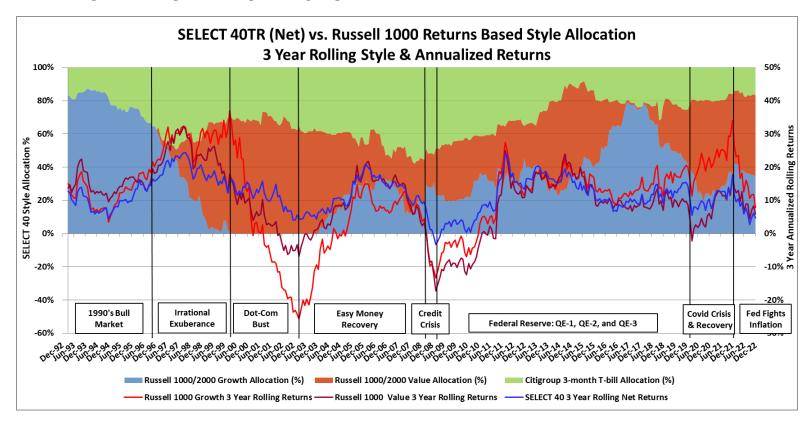












The RBSA chart illustrates our Microeconomic Theory of the Firm investment process. SELECT 40 investment strategy portfolios are not selected by style, but rather by fundamentals and style is driven by the fundamentals. The chart attributes of Growth and Value rotate given the macroeconomic conditions that are generally associated with Growth or Value or Cash investment strategies. Growth dominates in the 1990s but rotates to Value in the late 1990s and back to Growth in the mid-2000s.

In March 31, 2008 SELECT 40 attributes are Citigroup 3-month T-bill 58%, 15% Growth and 27% Value. SELECT 40 remained 100% invested through the 2008-2009 crash. At December 31, 2022 portfolio attributes are Citigroup 3-month T-bill 17%, Growth 34% and Value 49%. Implications of the high Cash attribute are that SELECT 40 2007-2009 Maximum Peak-to Trough Decline was -27.2% (Net) compared to S&P 500TR -50.9%.

Style investment strategies are successful if the investor can forecast the future market conditions and choose the matching style. While the evidence is ad hoc SELECT 40 changes style attributes automatically in anticipation of macroeconomic changes without the investor assuming the risk of forecasting the future.



**Annual Net Performance Statistics** 

							Since
	1 YR	3 YR	5 YR	10 YR	15 YR	20YR	Inception
Annualized Return							
SELECT 40TR Composite							
SELECT 40TR Hypothetical	-11.9%	4.8%	7.8%	10.5%	10.0%	11.2%	11.0%
S&P 500TR	-18.1%	7.7%	9.4%	12.6%	8.8%	9.8%	9.8%
Excess Return	6.2%	-2.9%	-1.7%	-2.1%	1.2%	1.4%	1.2%
Alpha	2.7%	-1.7%	-0.1%	0.1%	3.2%	3.7%	3.8%
Beta	0.78	0.84	0.82	0.83	0.74	0.73	0.71
R-Squared	0.90	0.92	0.91	0.89	0.87	0.85	0.75
Tracking Error	7.8%	6.1%	5.7%	5.0%	6.3%	6.0%	7.6%
Information Ratio	0.80	-0.48	-0.29	-0.42	0.19	0.23	0.16
Annualized Standard Deviation	n of Retu	ırns					
SELECT 40TR	19.2%	18.7%	16.2%	13.1%	13.0%	11.7%	12.6%
S&P 500TR	23.0%	21.2%	18.7%	14.8%	16.3%	14.8%	15.3%
Sharpe Ratio							
SELECT 40TR	-0.73	0.21	0.40	0.74	0.72	0.85	0.65
S&P 500TR	-0.88	0.32	0.43	0.80	0.50	0.58	0.45
Sortino Ratio							
SELECT 40TR	-0.97	0.31	0.59	1.17	1.14	1.36	0.99
S&P 500TR	-1.11	0.48	0.64	1.23	0.73	0.86	0.65
Risk Free Return	2.1%	0.8%	1.3%	0.8%	0.6%	1.2%	2.9%
Modigliani's M2 Risk Adjusted	Return						
SELECT 40TR	-14.3%	5.4%	8.9%	11.8%	12.6%	14.0%	13.4%
S&P 500TR	-18.1%	7.7%	9.4%	12.6%	8.8%	9.8%	9.8%
Maximum Equity Peak-to-Trou	ıgh Decli	ne					
SELECT 40TR	-20.2%	-20.2%	-20.2%	-20.2%	-27.2%	-27.2%	-29.5%
S&P 500TR	-23.9%	-23.9%	-23.9%	-23.9%	-50.9%	-50.9%	-50.9%
SELECT 40TR Capture Ratio							
Up Capture Ratio	85.0%	79.0%	78.9%	80.2%	79.7%	80.8%	76.3%
Down Capture Ratio	83.8%	91.9%	86.7%	85.4%	74.0%	70.5%	66.5%
\$10,000 Grows							
SELECT 40TR	\$8,809	\$11,494	\$14,524	\$27,080	\$41,975	\$83,124	\$421,747
S&P500 TR	\$8,189	\$12,479	\$15,688	\$32,654	\$35,461	\$64,844	\$287,069

Years ending 12/31/2022 Since Inception 3/31/1987



#### **Investment Statistics Definitions**

Many investors tend to focus exclusively on investment returns with little concern for investment risks. The definitions below are presented to help the investor understand the return-risk equation for the SELECT 40TR investment strategy as compared to other funds.

### **Absolute Return Measures**

Average Return (Arithmetic Mean): A simple average return (arithmetic mean) is calculated by summing the returns for each period, and dividing the total by the number of periods. The simple average return does not consider the compounding effect of returns.

Annualized Return: Is the monthly return (Geometric) annualized. The geometric mean is the monthly average return that, if applied each period, would produce a final dollar amount equivalent to the actual total value-added monthly by the fund's monthly returns to the initial investment. The monthly geometric return annualized is the Annualized Return or Compound Annual Return.

For example, if the fund begins with \$10,000 and average annual returns for three years are +20%, +50% and -19% the total increase equals 51%. The Average Annual Return is 17% or \$1,700 annually for a total value-added of \$5,100 and a calculated incorrect final total value for the fund of \$15,100.

However, the Annualized Return for the same time series computes the correct fund ending value, because it takes into account the fluctuating fund values to which the above period returns are applied: \$+2,000 equals \$12,000 +\$6,000 equals \$18,000 \$3,420 equals \$14,580 for an Annualized Return of 13.39%. 13.39% average return applied each year for three years grows \$10,000 to \$14,580.

The Arithmetic Return will always be greater than the Geometric Return and will not relate to the true ending value of the fund, because it is only an average of a time series and is not related to the fluctuating fund values over time. Investment performance beyond one year must be reported as Annualized Return to be accurate.

### **Absolute Risk-Adjusted Return Measures**

**Sharpe Ratio:** A measure of a fund's return relative to its risk. The return (numerator) is defined as the fund's period return less the risk-free rate. The risk (denominator) is defined as the standard deviation of the fund's returns.

**Sortino Ratio:** The Sortino ratio, a variation of the Sharpe ratio, differentiates harmful volatility from

volatility in general by using a value for downside deviation. The Sortino ratio is the fund's period return less the risk-free rate divided by the downside semi-variance, and so it measures the return to "bad" volatility. (Volatility caused by negative returns is considered bad or undesirable by an investor, while volatility caused by positive returns is good or acceptable.)

In this way, the Sortino ratio can help an investor assess risk in a better manner than simply looking at excess returns to total volatility, as such a measure does not consider how often returns are positive as opposed to how often they're negative. For the Sortino Ratio higher is better.

#### Modigliani Risk-Adjusted Performance or M2: In

1997, Nobel Prize winner Franco Modigliani and his granddaughter, Leah Modigliani, developed the Modigliani Risk-Adjusted Performance measure. They originally called it "RAP" (Risk Adjusted Performance). M2 is a measure of the risk-adjusted returns of an investment portfolio. It measures the returns of the portfolio, adjusted for the risk of the portfolio, relative to that of some benchmark (e.g., the S&P 500 TR).

It is derived from the widely used Sharpe Ratio, but it has the significant advantage of being in units of percent return. Given the volatility of two different portfolios and the volatility of a common benchmark like the S&P 500TR, M2 makes it simple to make risk-adjusted apples to apples percent return comparisons of investments to a common benchmark.

### Absolute Risk Measures

Annualized Volatility Risk: Monthly Standard Deviation measures the degree of variation of a fund's returns around the fund's mean (average) return for a 1-month period. The higher the volatility of the returns, the higher the standard deviation. The standard deviation is used as a measure of investment volatility risk.

Annualized Standard Deviation = Monthly Standard

Deviation x  $(12)_{1/2}$ .

For example, if the Annualized Volatility Risk of a stock is 15% and the distribution of returns are assumed to be the normal bell curve distribution for the period the expected stock price will be +/- one standard deviation of the average return 68% of the time and +/- two standard deviations of the average return 95% of the time.



Therefore, if the average price of a stock for a period was \$100 the investor's maximum expected stock price would be \$130 and the minimum expected stock price \$70.

Maximum Peak-to-Trough Decline or Maximum Drawdown: Measures the loss in any losing period during a fund's investment record. It is defined as the percent retrenchment from a fund's peak value to the fund's valley value. The Maximum Drawdown is in effect from the time the fund's retrenchment begins until a new fund high is reached. The maximum drawdown encompasses both the period from the fund's peak to the fund's valley (length), and the time from the fund's valley to a new fund high (recovery). It measures the largest percentage drawdown that has occurred in any fund's data record.

### **Relative Return Measures**

**Up Capture Ratio:** Measures a fund's compound return when the fund's benchmark return increased, divided by the benchmark's compound return when the benchmark return increased. The higher the value, the better.

**Down Capture Ratio:** Measures the fund's compound return when the benchmark was down divided by the benchmark's compound return when the benchmark was down. The smaller the value, the better.

### **Relative Risk-Adjusted Return Measure**

**Alpha:** Measures the fund's value added relative to a benchmark. The equation for Alpha is SELECT 40TR

Return= Alpha + Beta\* (S&P 500 TR Return). Alpha can be a positive or negative value.

**Tracking Error:** When using an indexing or any other benchmarking strategy, the amount by which the performance of the portfolio differed from that of the benchmark. In reality, no indexing strategy can perfectly match the performance of the index or benchmark, and the tracking error quantifies the degree to which the strategy differed from the index or benchmark.

Tracking errors are reported as a "standard deviation percentage" difference. This measure reports the

difference between the return an investor receives and that of the benchmark he or she was attempting to imitate.

Information Ratio: Measures the fund's active premium divided by the fund's tracking error. This measure relates the degree to which a fund has beaten the benchmark to the consistency by which the fund has beaten the benchmark. Information Ratio = Active Premium ÷ Tracking Error (Active Premium = Investment's annualized return - Benchmark's annualized return).

### **Relative Risk Measure**

**Beta:** Beta measures a fund's risk relative to the market as a whole (i.e. the "market" can be any index or investment). Beta describes the fund's sensitivity to broad market movements. For example, for equities, the stock market, or benchmark such as the S&P 500, is the independent variable and has a beta of 1. A fund with a beta of 0.5 will participate in broad market moves, but only half as much as the market overall.

**R-squared:** A statistical measure that represents the percentage of a fund's or stock's movements that can be explained by movements in the benchmark. For equities the benchmark is typically the S&P 500TR Index. R-squared values range from 0 to 1.00. A high R-squared between (0.85 and 1.00) indicates the fund's performance closely tracks the benchmark. A fund with a low R-squared (0.70 or less) indicates the fund's performance does not closely track the benchmark.

### **Active Share**

Active Share is a new risk measure that is being used by institutional investors as a complement to tracking error. It is used to identify active managers from strategies that are really based on closet indexing. Boston Harbor's SELECT 40 Active Share is 86.4% as of December 31, 2022. The range for active stock pickers is 60% to 90% and the possible ranges are 0 for a perfect closet indexer to 100% for an active manager's portfolio that has no relationship to the benchmark. The Active Share is a measure of how a portfolio differs from the benchmark and research papers report that high Active Shares outperform.

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Edition 4.0 - January 17, 2023