Idea – *Investing in small-cap companies*

Strategy – *Increase upside potential while mitigating downside*

Historical Performance – *Outperformed market by 139% over 10 years* Recommendation – *Buy*

$20k, In School Fund, Sell SPY

What to Sell – *SPY*

Effect on Portfolio – *Increase returns, while mitigating downside risk*

Backtesting Method: *Bloomberg*

Rebalance frequency: *Annually*

Number of positions: *N/A*
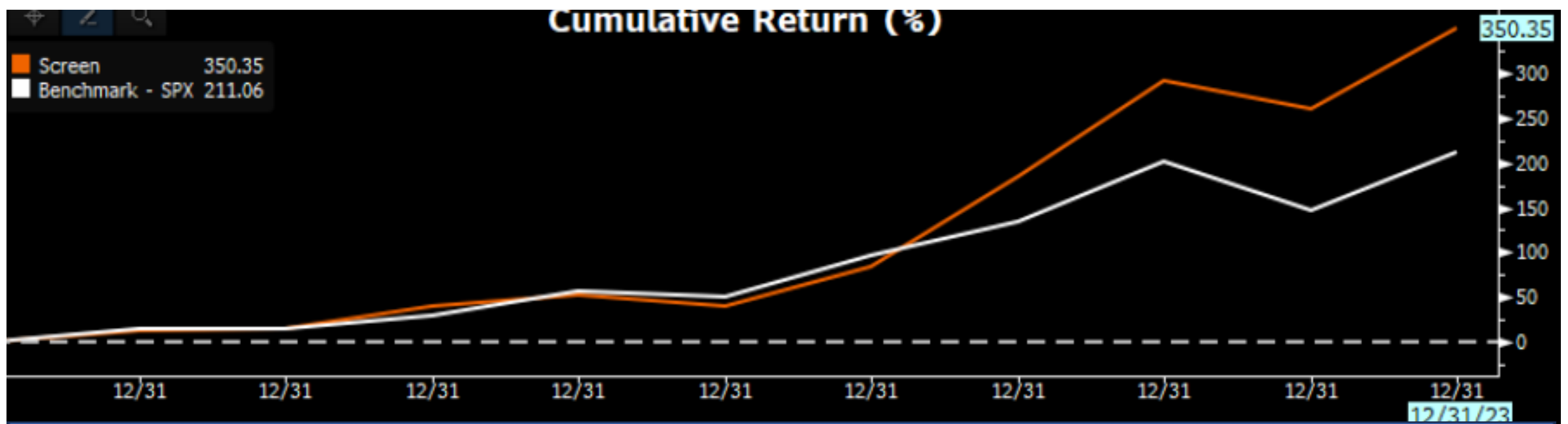
Number of years backtested: *10*

Weighting: *Equal*

Type of stock: *Common Stock*

Exchange listings included: *Major US Exchanges*

# OF STOCKS	N/A
MIN MONTHLY TRADING VOLUME	N/A
WEIGHTING SCHEME	EQUAL
REBALANCING FREQUENCY	ANNUAL
TIME FRAME	10 YEARS
CURRENCY	USD
MARKET CAP	$500M - $2B
PEG RATIO	0.5 - 1.0
D/E RATIO	< 20%
OPERATING CF	> $0

10-Year Analysis	Mean	Min	25%	Median	75%	Max
Market Cap ($Millions)	1,098.2	506.1	719.3	1,023	1,457.3	1,995.5
P/E Ratio	19.97	15.1	17.63	19.51	21.87	28.4
Monthly Trading Volume* ($Millions)	*	*	*	*	*	*
Share Price*	*	*	*	*	*	*

Cumulative Return (%)

350.35

300

250

200

150

100

50

0

12/31   12/31   12/31   12/31   12/31   12/31   12/31   12/31   12/31   12/31
12/31/23

Time series of monthly returns for strategy and for benchmark

Annualized	Return	α*	β*	σ	Sharpe	Treynor	Max DD	Info Ratio*	Idio. Risk
10 Year	17.82%	5.83	1.02	24.89%	0.75	0.14	25.98%	0.32	3.79%
1 Year	24.77%	-5.08	1.25	22.06%	1.04	0.17	12.01%	.02	2.39%
10 Year SPX	11.93%	0	1.0	15.2%	0.74	0.08	30.75%	N/A	0%
1 Year SPX	26.14%	0	1.0	12.6%	1.76	0.22	9.82%	N/A	0%

Name	Ticker	P/E Ratio	Average Volume ($)	Market Cap ($M)	Share Price ($)	# of Shares	Total Value ($)
A10 Networks Inc	ATEN	26.06	781,747	1,005	13.55	295	~4000

Openlane Inc	KAR	N/A	764,816	1,519	14.06	284	~4000
Kelly Services	KELYA	31.22	197,944	714.7	20.29	197	~4000
Ligand Pharm	LGND	63.68	112,831	1,266	72.60	55	~4000
Timkensteel	TMST	25.23	255,444	892.8	20.69	193	~4000

Beta	Existing Portfolio	New Portfolio
	1.22	1.21
SML	1.0	1.0
HMB	0.9	0.9
Standard Deviation	16.5%	16.6%

Old Sector Breakdown

- Info Tech
- Cons. Staples
- Semiconductors
- Health Care
- Materials
- Industrials
- Comm. Serv.
- Financials
- Cons. Disc.
- Utilities
- Real Estate

Idiosyncratic Risk	0.40%	0.45%

New Sector Breakdown

- Info Tech
- Cons. Staples
- Semiconductors
- Health Care
- Materials
- Industrials
- Comm. Serv.
- Financials
- Cons. Disc.
- Utilities
- Real Estate

Idea – *Invest in small-cap companies*

Strategy – *Increase upside potential while mitigating downside*

Historical Performance – *Outperformed market by 139% over 10 years* Recommendation – *Buy*

$20k, in School Fund, sell SPY

What to Sell – *SPY*

Effect on Portfolio – *Increase returns, while mitigating downside risk*