Less Is More-mentum Guardians of the Balance Sheet Kushal Golechha, Austin Arnold, Emily Biagi 11/10/2025

Summary

Idea – Stocks of firms with low asset growth that are also showing recent strong performance (momentum) tend to deliver higher future returns

Origin – "Asset Growth and the Cross-Section of Stock Returns" (Michael Cooper et al., 2008) "Returns to Buying Winners and Selling Losers" (Jegadeesh & Titman, 1993)

Strategy – Construct a portfolio of firms with bottom 10% non-current asset growth and top 10% momentum

Historical Performance – 965.55% 10-year total return, 31.31% 1-year return

Recommendation – Buy \$48k in School Fund, using \$30k cash and sell \$18k SPY

Effect on Portfolio – Increases Beta, Sharpe, and Expected Return





Low Asset Growth

Supporting Research:

"Asset Growth and the Cross-Section of Stock Returns" (Michael Cooper et al.,2008)

Why it works:

- Lower asset expansion reflect mature, stable operations and efficient capital allocation, rather than speculative growth
- Historically undervalued by the market, leading to higher future returns due to investor underreaction
- Supported across multiple timeframes and market caps, but tends to perform better in smallercap companies

How we measure it: Period over period quarterly growth of non-current assets





Momentum

Supporting Research:

"Returns to Buying Winners and Selling Losers: Implications for Stock Market Efficiency"

(Jegadeesh & Titman, 1993)

Why it works:

- Captures investor behavior and sentiment trends
- Supported by empirical evidence across multiple markets and timeframes
- Momentum captures return during bull and bear markets

How we measure it: 1 year total return





Strategy Details

Thesis: This strategy combines low non-current asset growth and momentum to identify undervalued, efficient firms with rising market sentiment, balancing long-term fundamentals with short-term performance to drive superior returns.

Scenarios Ran

- **Rebalance frequency**: Monthly, **Quarterly**, Yearly
- Number of positions: 10, <u>12</u>, 18
- Number of years backtested: <u>10</u>, 5, 3, 1
- Market cap: <u>1,000</u>, 5,000, 10,000
- Weighting: **Equal**
- Type of stock: <u>Common Stock</u>
- Exchange listings included: <u>United States</u>

# OF STOCKS	12
MIN MARKET CAP	\$1B
WEIGHTING SCHEME	EQUAL
REBALANCING FREQUENCY	QUARTERLY
TIME FRAME	10 YEARS
CURRENCY	USD





Screening Criteria

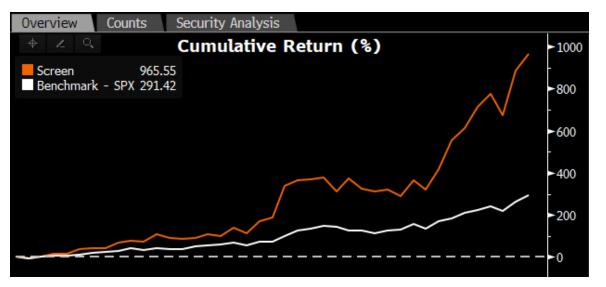
Selected Screening Criteria	Matches
Security Universe	1595635
51) :: Trading Status: Active	574954
52) # Exchanges: United States	28023
53) :: Security Types: Common Stock	18480
54) :: Security Attributes: Show Primary Security of company only	9164
55) :: Current Market Cap > 1000 Million	1992 (
56) # Top 10 Sequential Percentile Rank - Lower is Better(Period over Period Growth of Total Non-Current Assets from	115 🙃
57) # Top 10 Sequential Percentile Rank - Higher is Better(1 Year Total Return)	12 🕕
58) Add screening criteria	





Backtesting Results - Performance

10 year



1 year

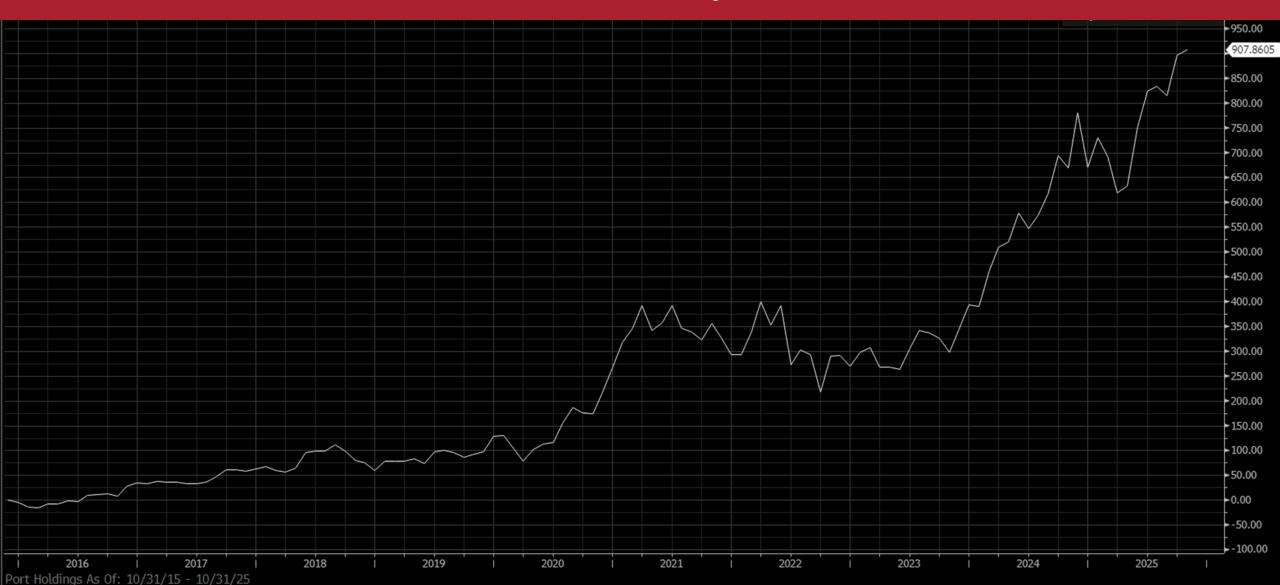


<u>Annualized</u>	Return	α*	β*	σ	Sharpe	Treynor	Info Ratio*	Idio. Risk
10 Year	26.7%	12.1%	1.17	33.92%	0.95	27.4%	0.54	21.2%
1 Year	31.31%	7.66%	1.05	33.03%	1.05	31.2%	0.57	23.5%
10 Year SPX	14.6%	0%	1.0	15.0%	0.69	16.9%	0.00	0%
1 Year SPX	21.42%	0%	1.0	18.0%	0.80	18.4%	0.00	0%





10 Year Monthly Returns







Backtesting Results - Characteristics

10-Year Analysis	Mean	Min	25%	Median	75%	Max
Market Cap (\$Billions)	12.01	1.00	1.59	2.59	6.53	296.08
P/E Ratio	45.10	1.18	15.41	24.92	42.07	443.86
Monthly Trading Volume (Millions of shares)	103.45	0.21	9.76	22.60	78.50	2,272.31
Share Price	72.94	1.65	18.11	36.48	75.32	5,099.28





Recommended Purchases

Name	Ticker	P/E Ratio	Monthly Trade Volume (M)	Market Cap (\$B)	Share Price	# of Shares	Total Value
Astronics Corp	ATRO	33.44	16.46	1.75	46.98	85	\$4,000
Biglari Holdings	ВН	16.38	0.36	1.11	360.01	11	\$4,000
Commscope Holdings	сомм	45.36	110.67	3.83	16.65	240	\$4,000
Carpenter Tech	CRS	39.77	19.13	15.74	328.00	12	\$4,000
Anywhere Real Estate	HOUS		61.32	1.12	11.42	350	\$4,000
Kenon Holdings Ltd	KEN		0.33	2.71	52.66	76	\$4,000
Centrus Energy	LEU	48.65	32.13	6.69	294.16	14	\$4,000
Nektar Therapeutics	NKTR		21.42	1.23	55.97	71	\$4,000
NRG Energy	NRG		47.67	33.24	172.50	23	\$4,000
Precigen Inc	PGEN		196.98	1.46	3.90	1026	\$4,000
Tutor Perini Corp	TPC		12.05	3.55	62.94	64	\$4,000
Travere Therapeutics	TVTX		47.25	3.14	32.34	124	\$4,000





Sell Proposal – Sell \$18k SPY

- The fund currently has around \$174,000 invested in SPY
- Our strategy outperforms SPY

Metric	SPY	Our Strategy
Sharpe	0.87*	0.95
σ	15.27%	33.92%
β	1.0	1.17
CAGR	14.6%	26.7%

*10 year





Potential Risks

Non-Current Asset Growth

- Favors firms shrinking or slowly growing longterm assets, which can lead to overweighting less capital-intensive sectors
- May miss high-growth firms actively reinvesting in expansion and innovation
- Firms shrinking non-current assets may be in late growth stages which limits upside

Momentum

- Vulnerable to sudden price corrections
- May underperform in sideways or volatile markets where momentum signals weaken
- Could overweight crowded trades during strong bull runs, increasing downside risk when sentiment shifts





Effect on the Portfolio

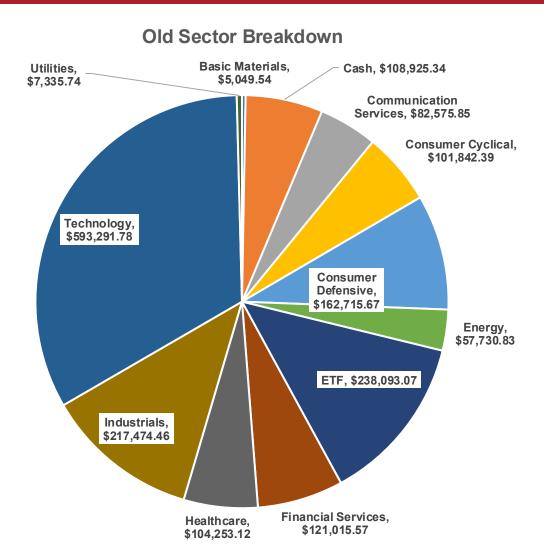
	Existing Portfolio	New Portfolio
Beta	1.02	1.028
Sharpe	0.89	0.892
Alpha(annualized)	-0.14%	0.19%
Standard Deviation	17.28%	17.72%
Expected Return	13.40%	13.75%

Summary: Increases all metrics, more risk, more reward!

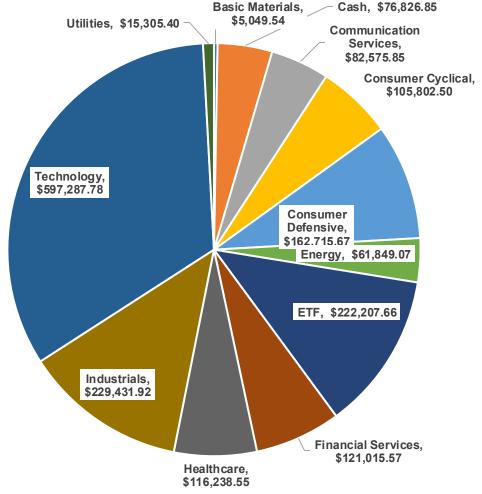




Old and New Sector Portfolio Breakdown



New Sector Breakdown Basic Materials, \$5,049.54







Recap

Idea – Stocks of firms with low asset growth that are also showing recent strong performance (momentum) tend to deliver higher future returns

Strategy – Construct a portfolio of firms with bottom 10% non-current asset growth and top 10% momentum

Historical Performance – 965.55% 10-year total return, 31.31% 1-year return 10 yr Information Ratio: 0.54, 10 yr Sharpe Ratio: 0.95

Recommendation – Buy \$48k in School Fund, using \$30k cash and sell \$18k SPY

Effect on Portfolio – Increases Beta, Sharpe, and Expected Return





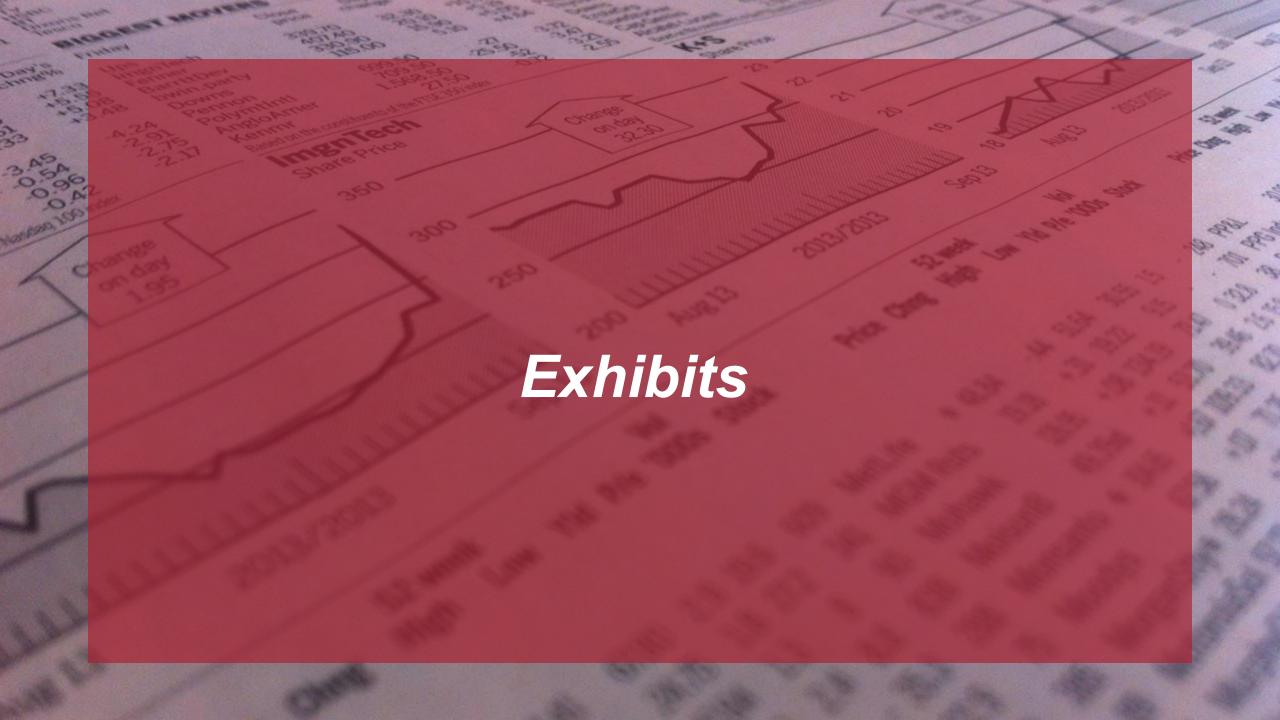
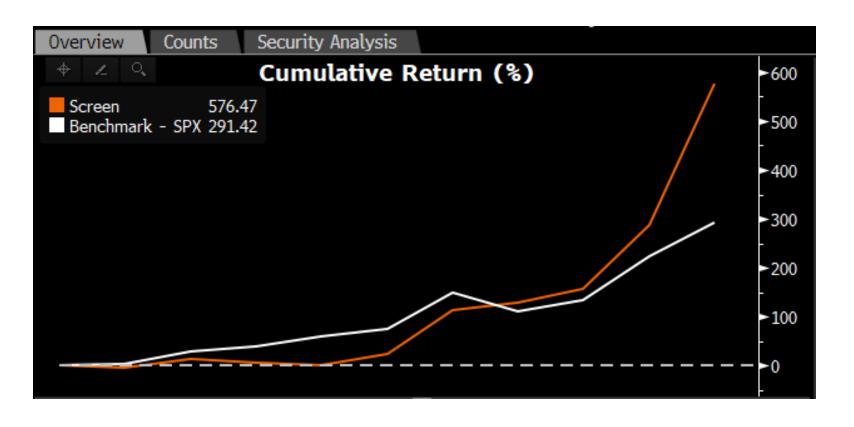


Exhibit 1 - 10 yr, Yearly Rebalancing

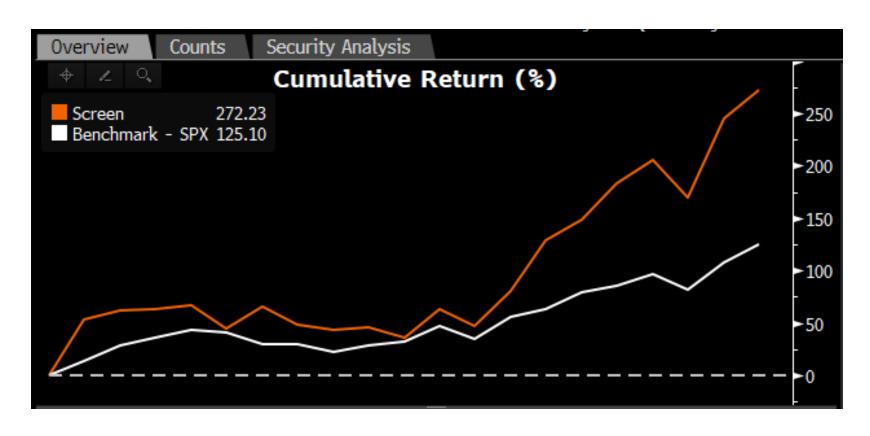


Total Return	576.47
Mean Return (%)	24.30
Mean Active Return (%)	8.57
Minimum Return (%)	-7.03
Maximum Return (%)	74.76
Standard Deviation	28.89
Semi variance	20.27
Tracking Error (%)	21.70
Skewness	-0.05
Sharpe Ratio	0.84
Jensen Alpha	8.97
Information Ratio	0.38
Beta	1.05
Correlation	0.66





Exhibit 2 – 5 yr, Quarterly Rebalancing

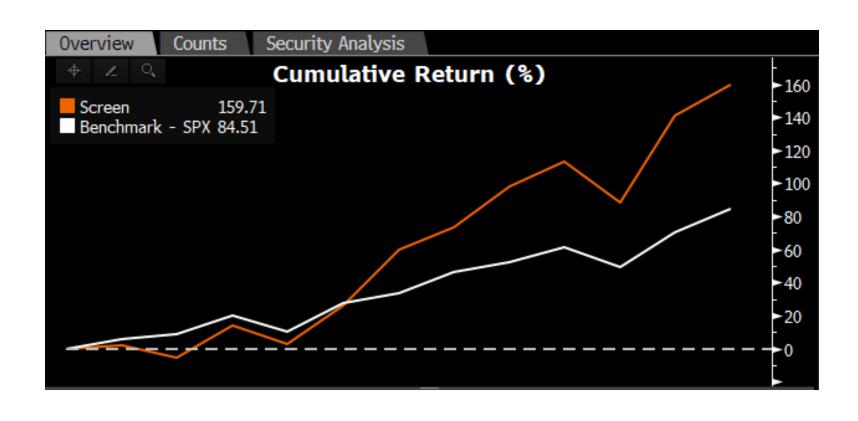


272.23
35.72
14.85
-13.71
53.02
38.83
27.22
32.72
-0.05
0.96
16.80
0.54
1.26
0.55





Exhibit 3 – 3 yr, Quarterly Rebalancing

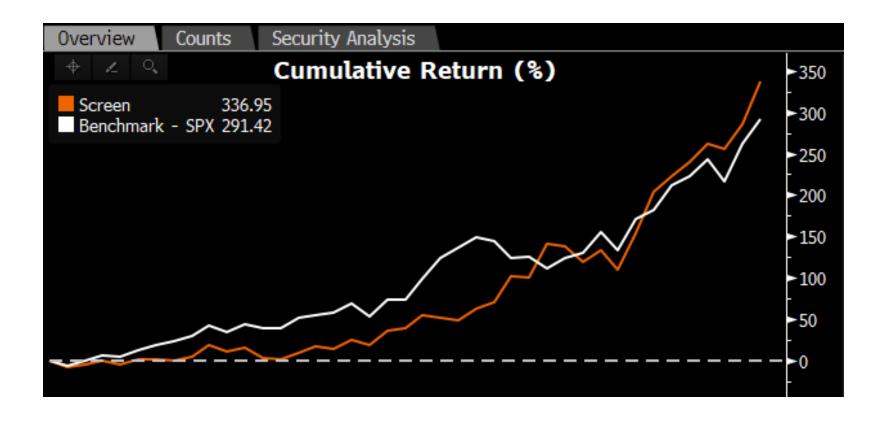


Total Return	159.71
Mean Return (%)	41.71
Mean Active Return (%)	15.29
Minimum Return (%)	-11.65
Maximum Return (%)	27.66
Standard Deviation	29.89
Semi variance	20.65
Tracking Error (%)	22.40
Skewness	0.10
Sharpe Ratio	1.31
Jensen Alpha	14.04
Information Ratio	0.71
Beta	1.29
Correlation	0.68





Exhibit 4 – Market Cap > \$10B

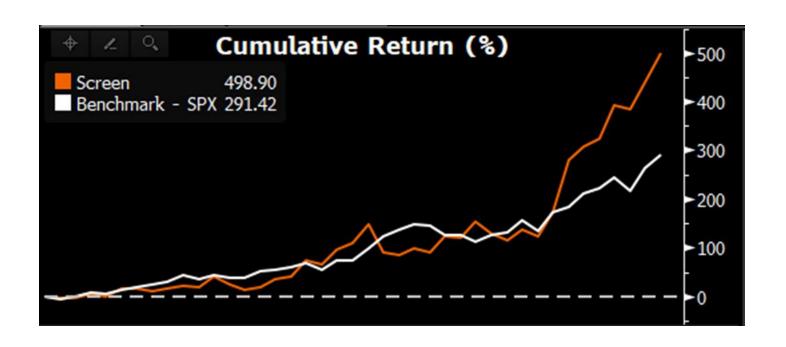


Total Return	336.95
Mean Return (%)	17.34
Mean Active Return (%)	1.56
Minimum Return (%)	-10.81
Maximum Return (%)	20.97
Standard Deviation	25.21
Semi variance	19.55
Tracking Error (%)	18.37
Skewness	-0.35
Sharpe Ratio	0.70
Jensen Alpha	3.82
Information Ratio	0.15
Beta	0.95
Correlation	0.69





Exhibit 5 – Weighted by Market Cap

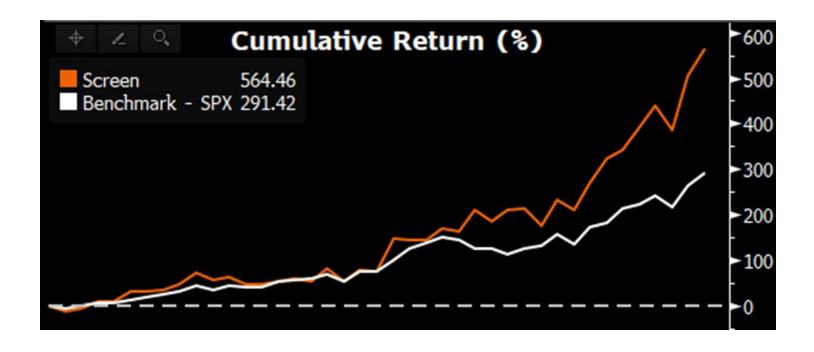


Total Return	498.90
Mean Return (%)	22.69
Mean Active Return (%)	6.37
Minimum Return (%)	-23.95
Maximum Return (%)	39.48
Standard Deviation	35.20
Semi variance	28.00
Tracking Error (%)	28.81
Skewness	-0.52
Sharpe Ratio	0.72
Jensen Alpha	9.06
Information Ratio	0.32
Beta	1.12
Correlation	0.58





Exhibit 6 – Total Asset Growth

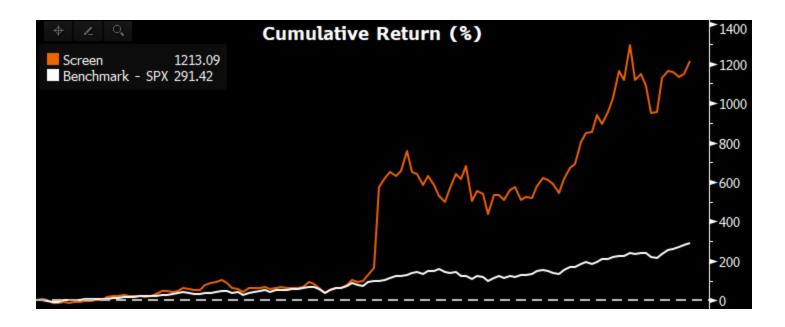


Total Return	564.46
Mean Return (%)	24.11
Mean Active Return (%)	7.64
Minimum Return (%)	-16.28
Maximum Return (%)	42.89
Standard Deviation	31.55
Semi variance	23.99
Tracking Error (%)	24.23
Skewness	-0.35
Sharpe Ratio	0.79
Jensen Alpha	8.82
Information Ratio	0.37
Beta	1.12
Correlation	0.64





Exhibit 7 – Monthly Rebalancing, 10 yr



Total Return	1213.09
Mean Return (%)	42.49
Mean Active Return (%)	23.23
Minimum Return (%)	-22.43
Maximum Return (%)	158.68
Standard Deviation	39 . 85
Semi variance	26.63
Tracking Error (%)	35.17
Skewness	4.34
Sharpe Ratio	0.94
Jensen Alpha	22.55
Information Ratio	0.56
Beta	1.03
Correlation	0.47





Security Count Turnover, Quarterly Rebalancing, 10y

