Strategy Malachite

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Performance

- Trades 300 of some of the most liquid Tape A and B securities
- Daily Return Sharpe 6
- Average unleveraged daily return 13bps. 38% annualized unleveraged, or 250% with standard 15% portfolio margin. For example: with 20M of base capital it makes 50M/year.
- US Equity market capacity 500M
- Average holding period is 12 hours
- Average signal duration is 4.5 hours giving ample entry time.
- Average daily traded volume per single security in traded universe on NASDAQ alone – 175MM.
- Max draw down 3%

Alpha source

- Model captures mean reversion and trend dynamics in market cross-sectional data.

- Relative Strength of individual assets with respect to relevant indices is strongly represented.

- Model works on both high frequency and medium frequency time-scales

- Multi-horizon non-linear factor models, advanced statistical techniques as well as indicator selection and transformation create an edge.

- Trades in all aggressive regime.

- Alpha signal does not experience significant adverse selection and trading is done in narrow spread regimes.

Risk Aspects

- Broad diversification with maximum single name exposure under 5%

- Highly liquid securities with average ADV of 175MM

- Portfolio Sharpe maximizing allocation

- Average beta exposure is 20%

- Single name and portfolio level stop losses

- Broad diversification across industries and sectors

Graphs

- Return Data slide on next page shows Equity Curve and a histogram (empirical distribution) of 5 Day returns giving tail shape, skewness and etc.

- Trade Statistics slide shows histogram consolidating signal and holding period statistics, showing persistence and duration of entry signal providing high entry capacity.

- Return Streaks and Draw downs shows draw down histogram without any stop losses applied. Second important graph shows return autocorrelation function. Since there are no significant negative autocorrelations, there is no evidence of "streaks".

- Daily Trading Activity shows number of trades across all traded securities. This includes multiple same direction trades per security.

- Relative versus Absolute Return slide shows present difference in Sharpe with respect to return on traded capital versus absolute dollar based Sharpe. The difference is due to daily exposure variation.
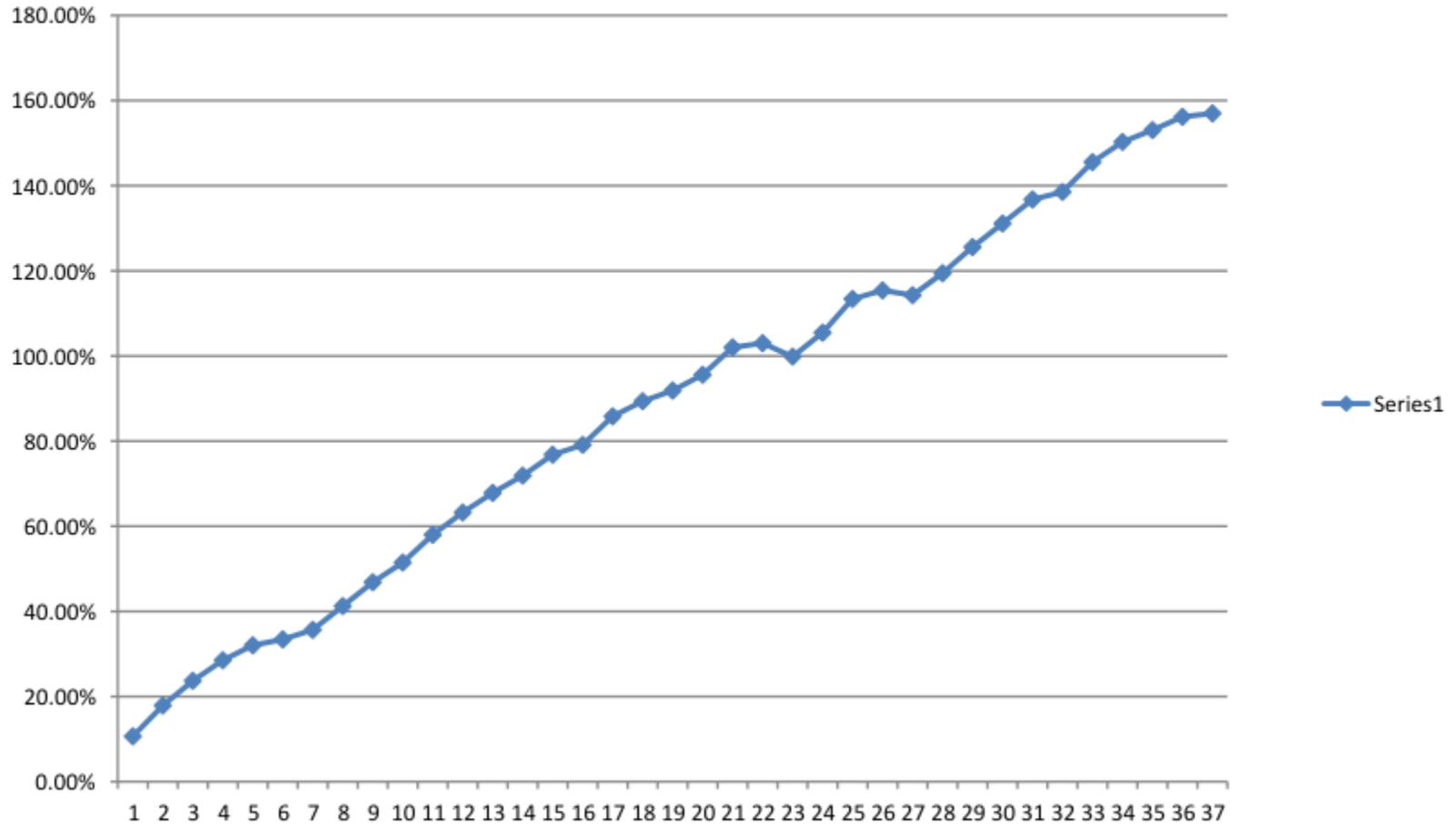
Return data

Cumulative Returns over 3.5 years: Daily Return on Trading Capital Sharpe 6.6
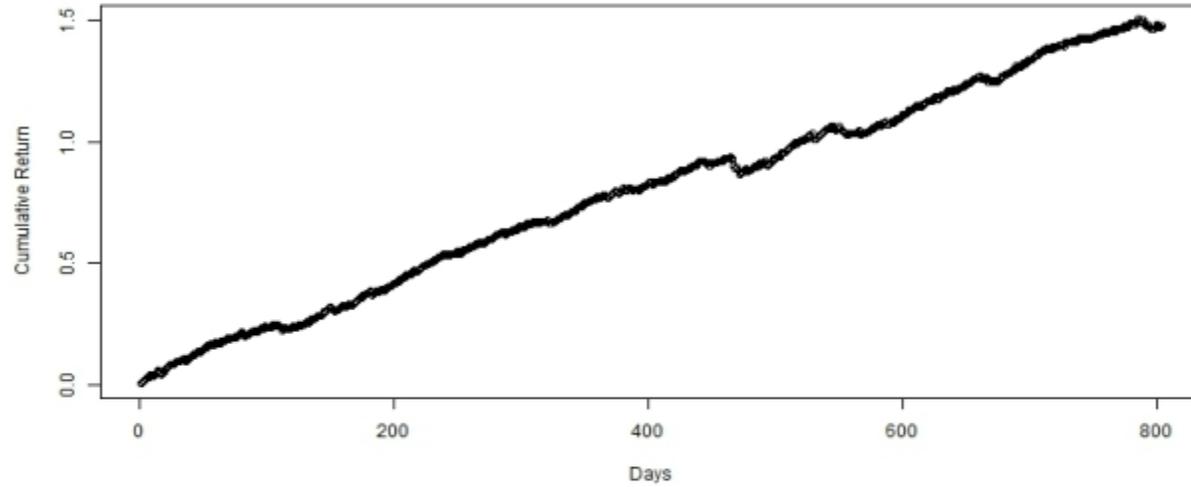
Daily Unleveraged Return Histogram: mean 18bps / day
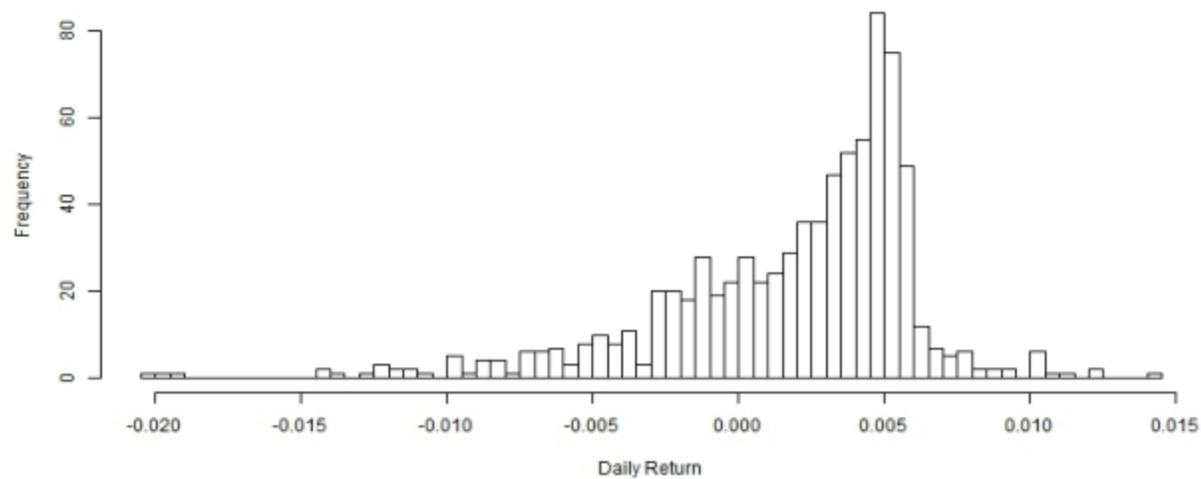
Monthly returns

Monthly Returns

Month	Return	Cumulative Return	Month	Return	Cumulative Return
1	10.70%	10.70%	20	3.72%	95.60%
2	7.23%	17.90%	21	6.42%	102.02%
3	5.80%	23.70%	22	1.00%	103.02%
4	4.83%	28.53%	23	-3.17%	99.85%
5	3.52%	32.05%	24	5.62%	105.47%
6	1.39%	33.43%	25	7.94%	113.41%
7	2.24%	35.68%	26	2.00%	115.41%
8	5.59%	41.26%	27	-1.12%	114.29%
9	5.60%	46.86%	28	5.15%	119.44%
10	4.63%	51.49%	29	6.15%	125.59%
11	6.52%	58.00%	30	5.54%	131.12%
12	5.24%	63.24%	31	5.64%	136.77%
13	4.60%	67.84%	32	1.77%	138.54%
14	4.06%	71.90%	33	7.02%	145.56%
15	4.92%	76.83%	34	4.74%	150.29%
16	2.30%	79.13%	35	2.77%	153.06%
17	6.71%	85.84%	36	3.12%	156.19%
18	3.54%	89.38%	37	0.79%	156.98%
19	2.50%	91.88%			

Trade statistics

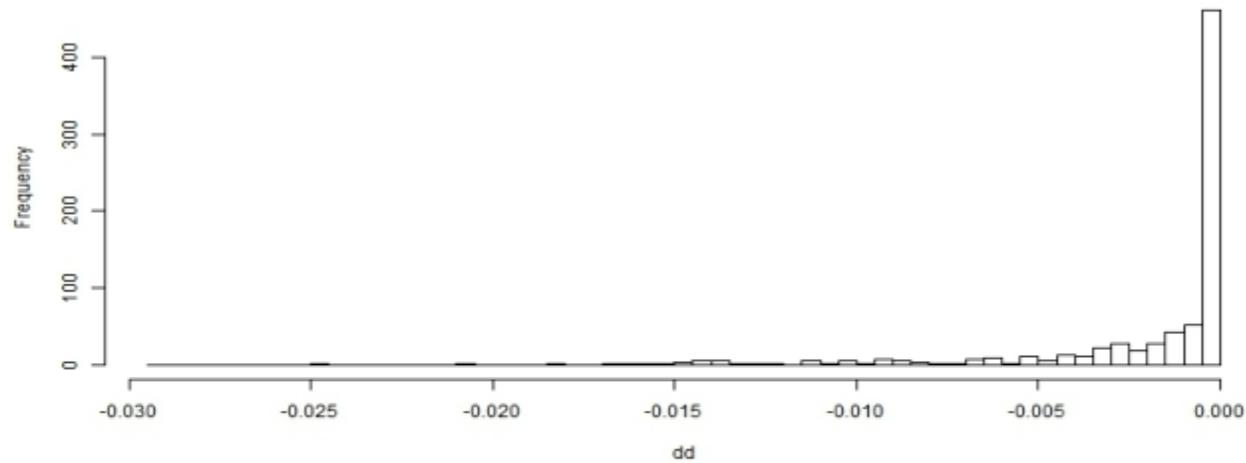Signal Duration Histogram: mean 4 hours
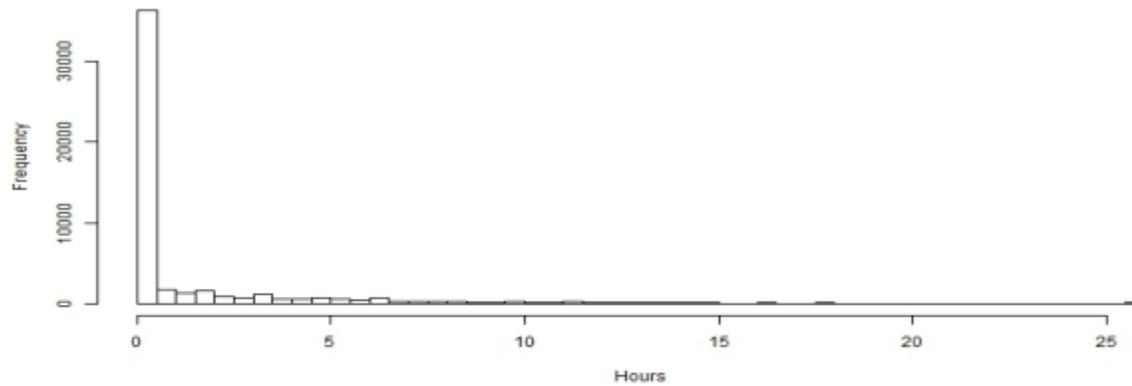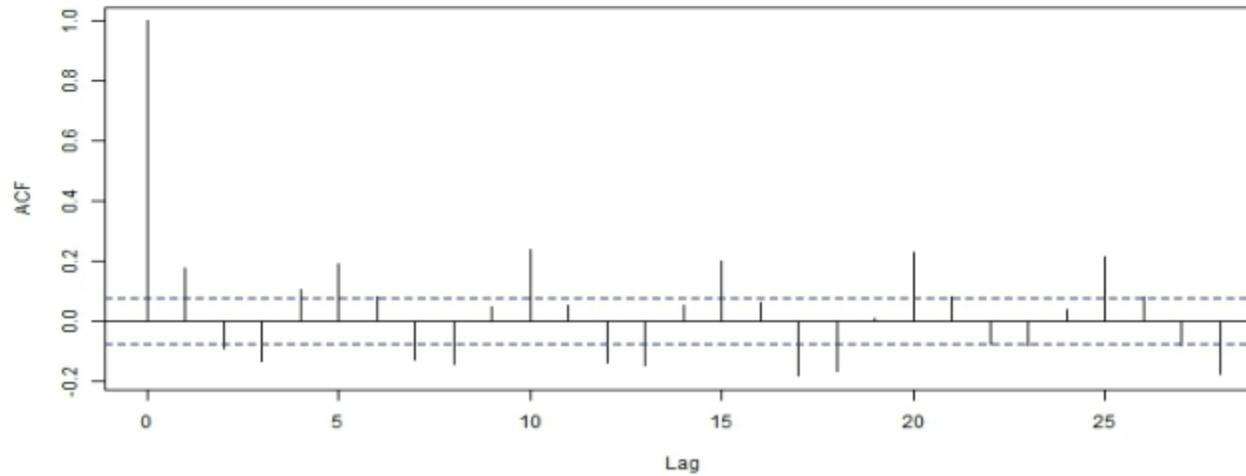

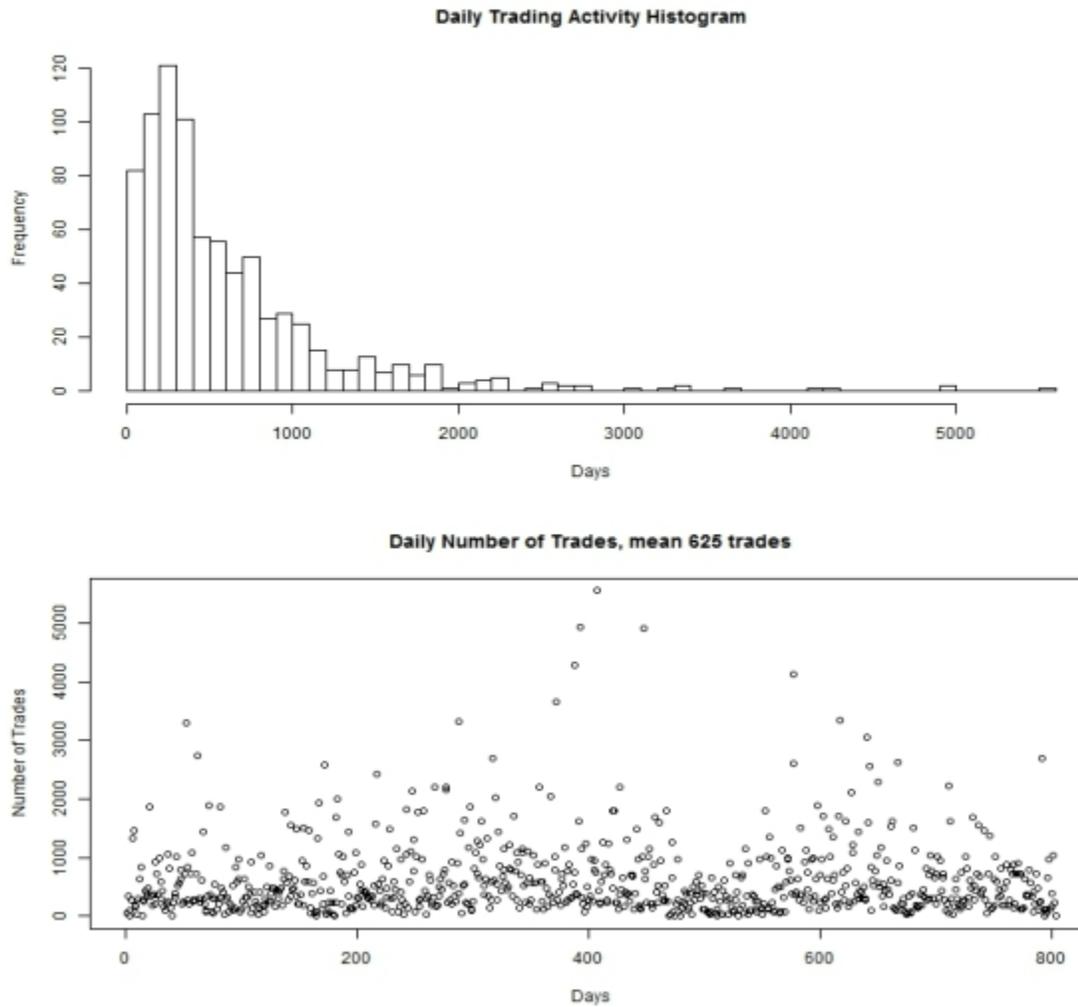Holding Period Histogram: mean 12 hours
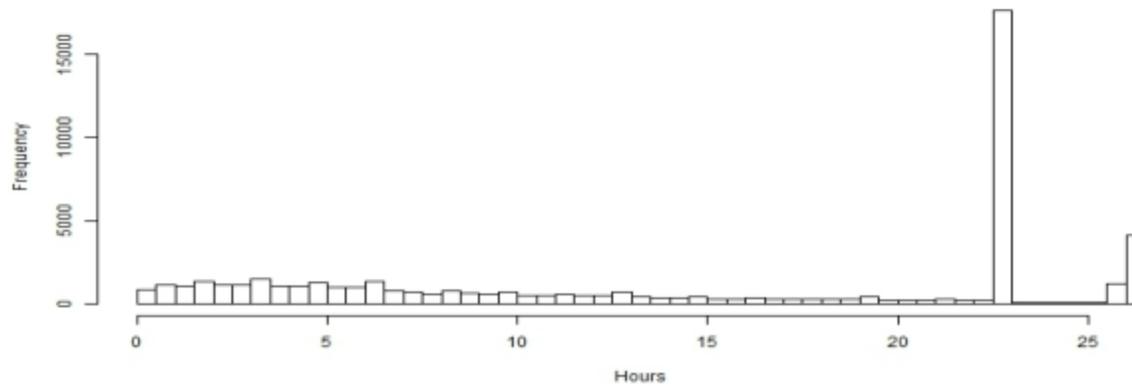
Return Streaks and Draw Downs

Draw Down Histogram: Max Draw Down 3%

Return Autocorrelation

Daily Trading Activity

Daily Trading Activity Histogram

Daily Number of Trades, mean 625 trades

Relative versus Absolute Returns

Absolute Return: Sharpe 3.8

Relative Return: Sharpe 6.1
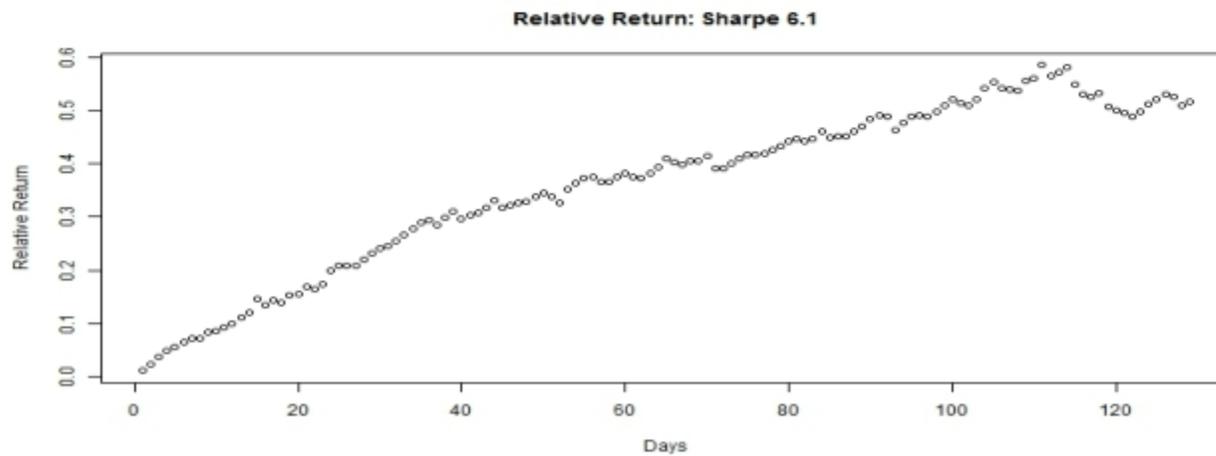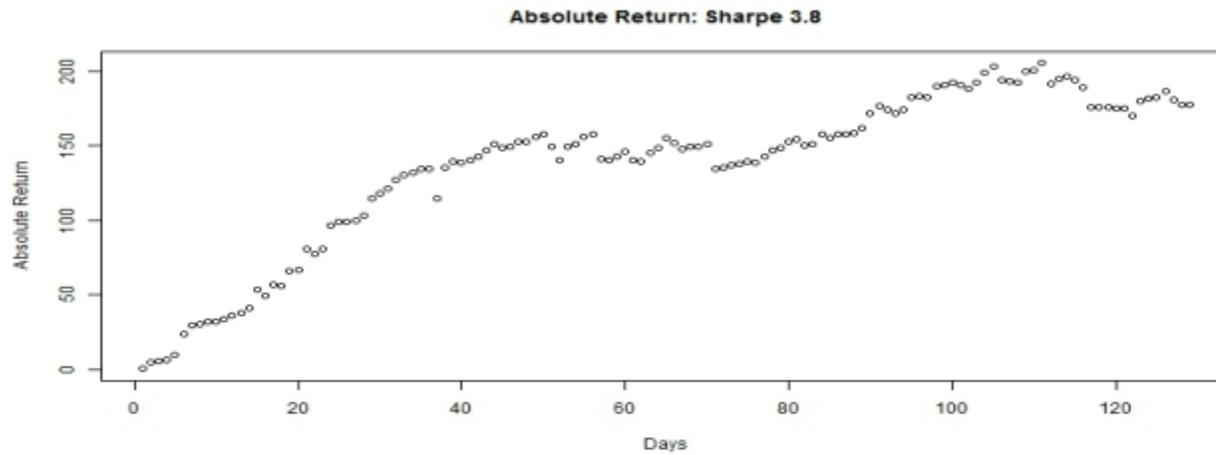
BACKGROUND HIGHLIGHTS

- Spent 2 years at Tower Research. Developed and ran high frequency Spot FX Strategy, Created Alpha Models for FX, Futures and Equities

- Models across products generated in the vicinity of 100K/day, average return of approximately 10bps with combined Sharpe of 8+. Overall unleveraged capital approximately 100MM.

- Before Tower Research spent 4 years at Bank of New York/BNY Converges focusing on advanced algorithmic execution of international and domestic equities handling multibillion dollar daily volumes.

- As part of BNY Convergex, patented Optimal Portfolio Implementation Shortfall algorithm based on state-of-the-art market impact analysis and in-house fundamental risk factor model as well as stochastic dynamic optimization methods. This resulted in major US Equity algo flow increase.

- Academic background includes PhD research in multivariate complex function theory achieving major result concerning surjectivity of convolution operators.