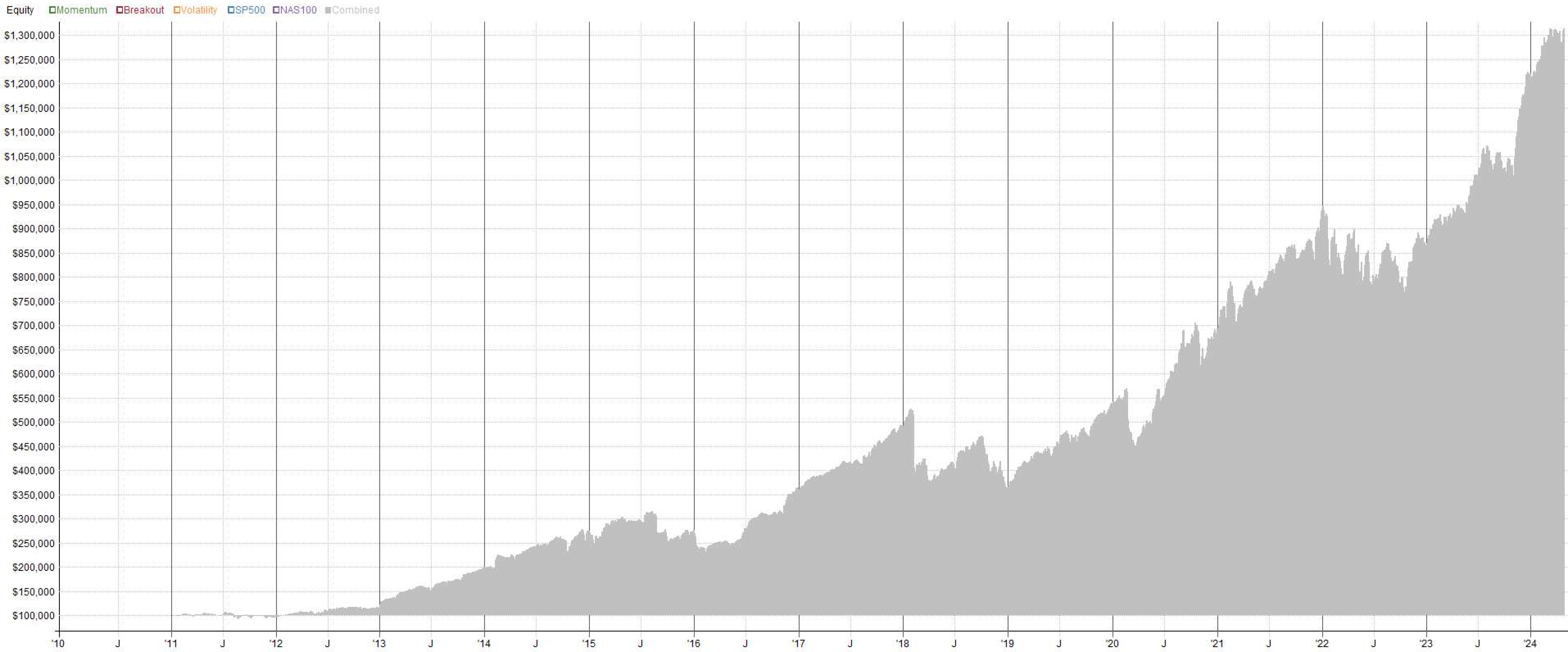
# Trading System

| S/N | REGIME | SIDE | ORDERS | STRATEGY | ALLOCATION | TIMEFRAME | COMMISSION | SLIPPAGE | APPROACH | TICKER |
|---|---|---|---|---|---|---|---|---|---|---|
| **1** | **Bull Market** | **Long** | **Market Order EOD** | **Double Momentum Strategy (DMS)** | **40%** | **1 Day** | **0.005 * Share Max: 1** | **0.001 * FillPrice** | **Algorithmic** | **NDX Universe** |
| **2** | **Bull Market** | **Long** | **Market Order EOD** | **Range Breakout Strategy (RBS)** | **40%** | **1 Day** | **0.005 * Share Max: 1** | **0.001 * FillPrice** | **Algorithmic** | **NDX Universe** |
| **3** | **Bull & Bear Market** | **Short** | **Market Order EOD** | **Market Volatility Strategy (MVS)** | **20%** | **1 Day** | **0.005 * Share Max: 1** | **0.001 * FillPrice** | **Algorithmic** | **UVXY** |


Equity
Momentum
Breakout
Volatility
SP500
NAS100
Combined
$1,300,000
$1,250,000
$1,200,000
$1,150,000
$1,100,000
$1,050,000
$1,000,000
$950,000
$900,000
$850,000
$800,000
$750,000
$700,000
$650,000
$600,000
$550,000
$500,000
$450,000
$400,000
$350,000
$300,000
$250,000
$200,000
$150,000
$100,000
'10 J '11 J '12 J '13 J '14 J '15 J '16 J '17 J '18 J '19 J '20 J '21 J '22 J '23 J '24

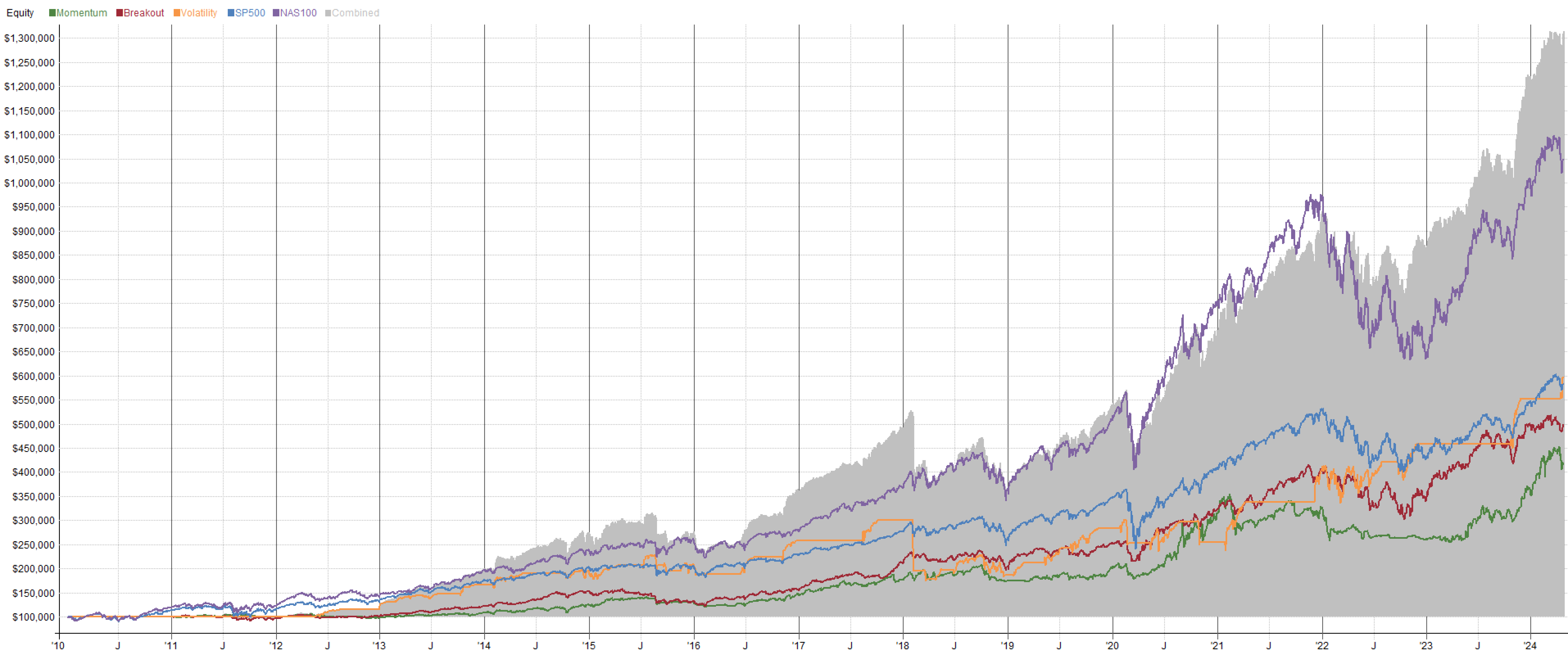
## Summary Stats

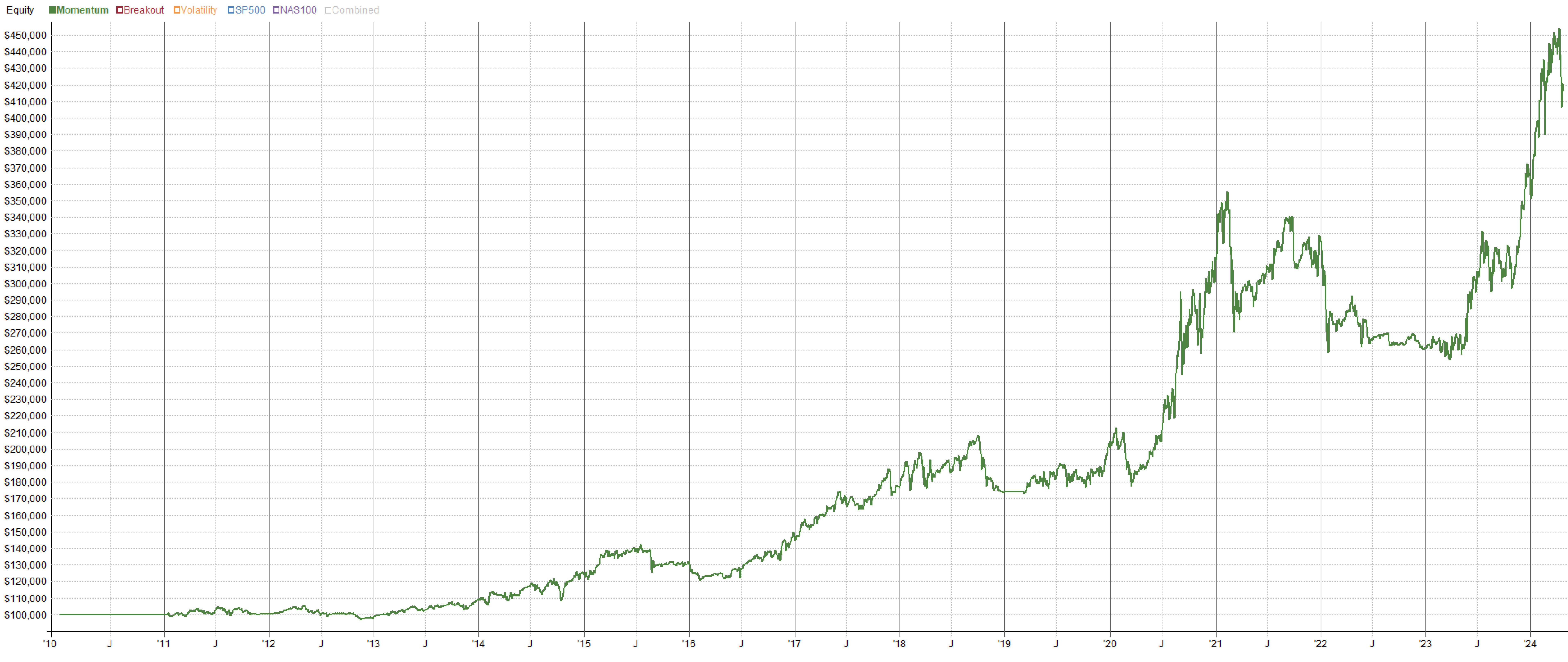
| | Momentum | Breakout | Volatility | SP500* | NAS100* | Combined |
|---|---|---|---|---|---|---|
| **Periods** | 3,349 | 3,350 | 3,002 | 3,601 | 3,601 | 3,350 |
| **NetProfit** | $316,430 | $399,999 | $497,976 | $482,315 | $948,763 | $1,214,405 |
| **Comp** | True | True | True | True | True | True |
| **ROR** | 4.61% | 6.57% | 11.08% | 13.11% | 17.86% | 21.36% |
| **MaxDD** | -11.18% | -12.48% | -24.53% | -33.68% | -35.12% | -32.05% |
| **MAR** | 0.41 | 0.53 | 0.45 | 0.39 | 0.51 | 0.67 |
| **Trades** | 531 | 664 | 31 | 58 | 62 | 1,226 |
| **PctWins** | 53.30% | 53.61% | 61.29% | 81.03% | 77.42% | 53.67% |
| **AvgWin** | 11.97% | 16.59% | 50.51% | 6.08% | 7.63% | 15.59% |
| **AvgLoss** | 6.91% | 11.61% | 21.02% | 7.82% | 7.27% | 9.76% |
| **PayoffRatio** | 1.73 | 1.43 | 2.40 | 0.78 | 1.05 | 1.60 |
| **WinLen** | 48.49 | 59.13 | 51.63 | 62.70 | 59.67 | 54.34 |
| **LossLen** | 26.93 | 37.89 | 21.25 | 59.27 | 52.50 | 32.75 |
| **Expectancy** | 3.15% | 3.51% | 22.82% | 3.45% | 4.27% | 3.84% |
| **ProfitFactor** | 2.00 | 1.59 | 2.95 | 2.71 | 2.77 | 1.97 |
| **Sharpe** | 0.67 | 0.87 | 0.91 | 0.80 | 0.91 | 1.04 |
| **Sortino** | 1.02 | 1.44 | 1.26 | 1.25 | 1.44 | 1.54 |
| **AvgExp** | 24.21% | 38.83% | 8.24% | 99.93% | 99.95% | 70.41% |
| **MaxExp** | 39.93% | 39.95% | 20.00% | 100.00% | 100.00% | 99.85% |
| **AvgUse** | 24.22% | 38.84% | 8.24% | 99.95% | 99.98% | 70.44% |
| **MaxUse** | 39.93% | 39.95% | 20.00% | 100.00% | 100.00% | 99.85% |

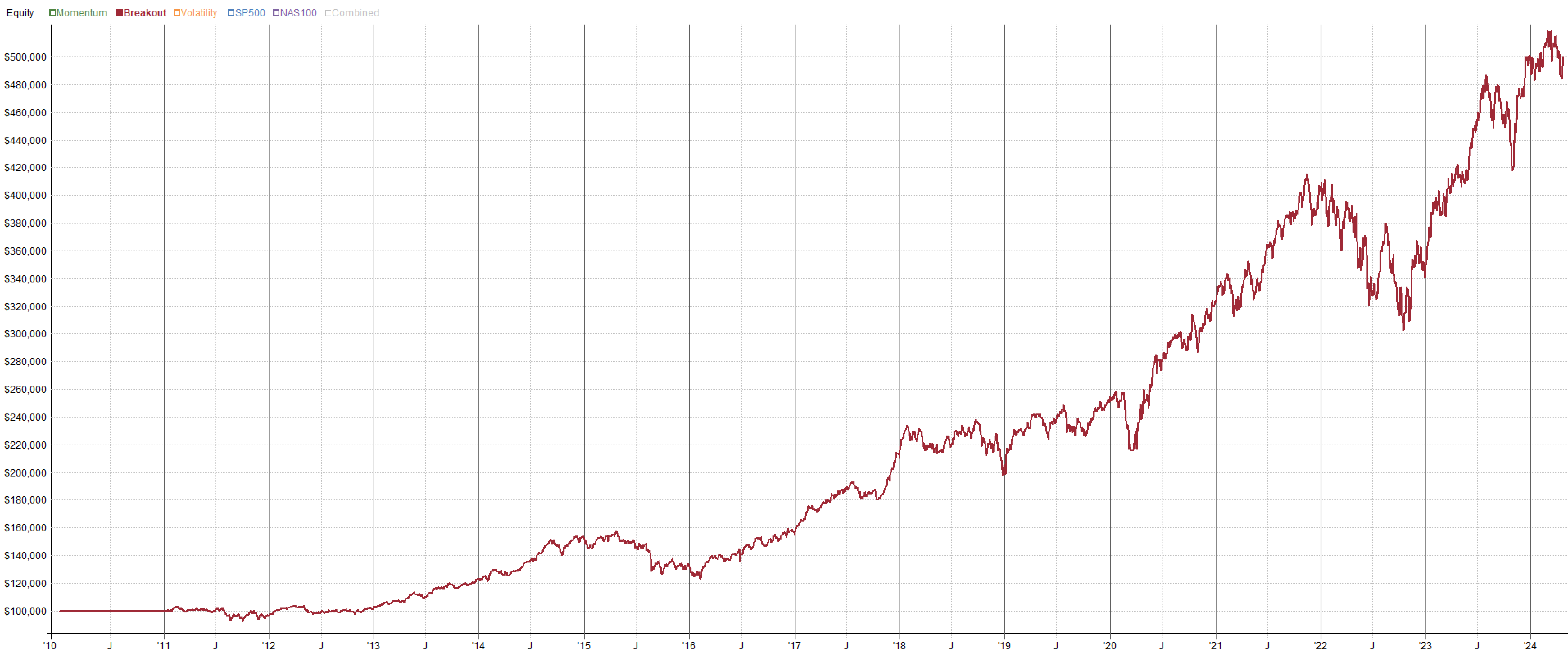
** benchmark strategies are not included in combined stats*

# Combined Monthly Percent Gains

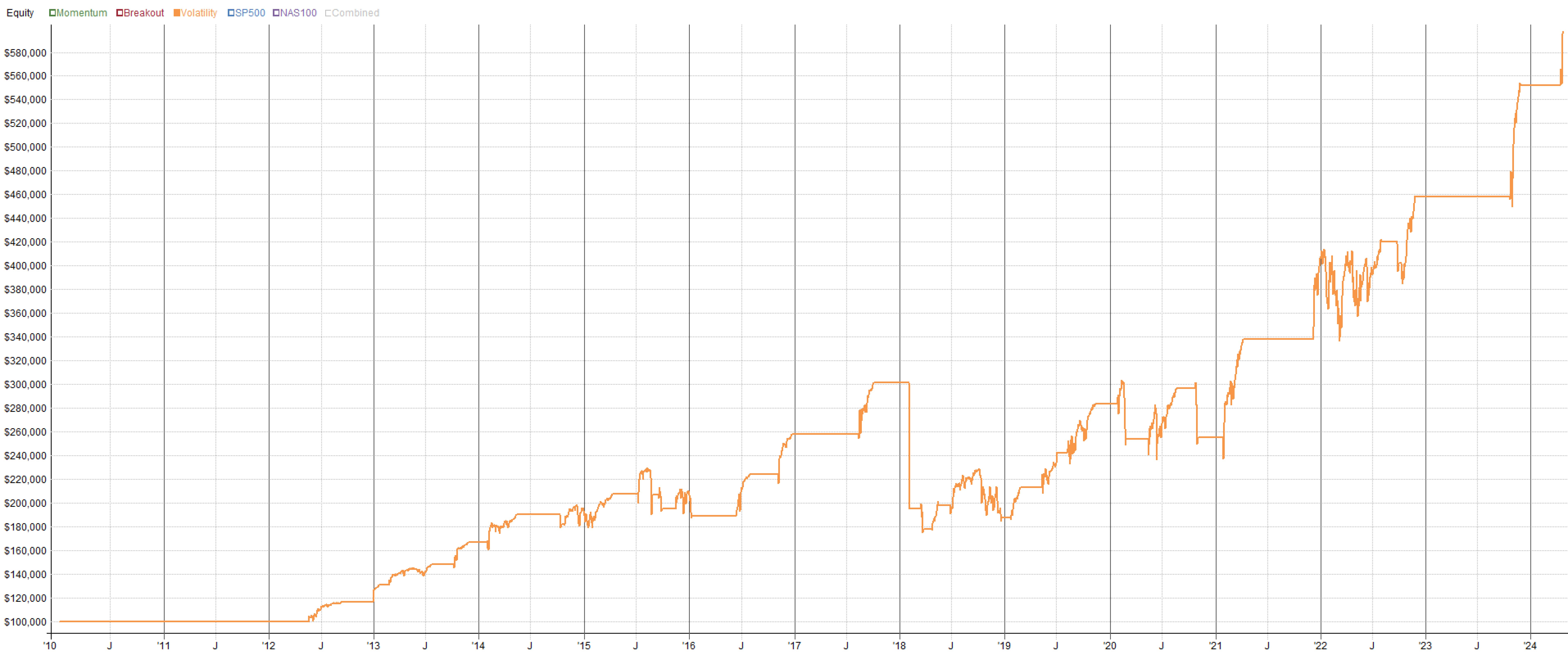
| YEAR | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | TOTAL | MaxDD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **2010** | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | **0.0%** | -0.0% |
| **2011** | -1.3% | 3.5% | 0.1% | 1.6% | -1.0% | 0.6% | 0.1% | -2.9% | -5.2% | 4.1% | -1.9% | -0.3% | **-2.8%** | -12.9% |
| **2012** | 3.9% | 3.1% | 3.0% | 1.0% | -4.8% | 8.0% | 1.3% | 1.6% | 2.0% | -2.3% | 1.3% | 6.1% | **26.4%** | -9.8% |
| **2013** | 9.7% | 3.5% | 7.5% | 4.1% | 1.3% | -2.2% | 8.6% | 1.0% | 2.8% | 6.4% | 3.7% | 4.1% | **62.7%** | -8.5% |
| **2014** | -0.9% | 11.6% | -0.2% | 2.7% | 4.2% | 3.4% | 0.3% | 5.2% | -0.1% | -0.2% | 6.2% | -2.8% | **32.8%** | -11.8% |
| **2015** | -6.7% | 15.6% | 2.5% | 0.5% | 0.1% | -1.1% | 7.3% | -13.8% | -6.8% | 4.1% | 3.7% | -0.9% | **1.5%** | -22.4% |
| **2016** | -10.2% | 0.6% | 3.7% | -1.6% | 3.1% | 9.3% | 8.2% | 2.1% | 0.9% | 0.7% | 10.6% | 3.3% | **33.1%** | -13.8% |
| **2017** | 5.3% | 1.7% | 2.4% | 2.2% | 2.8% | -0.1% | -0.0% | 6.0% | 4.5% | 2.2% | 2.6% | 2.0% | **36.2%** | -6.2% |
| **2018** | 7.3% | -21.8% | -7.1% | 1.2% | 4.3% | 0.4% | 7.4% | 5.0% | 3.8% | -15.5% | 3.1% | -10.9% | **-25.0%** | -32.0% |
| **2019** | 8.9% | 4.3% | 2.4% | 2.1% | -3.7% | 8.9% | 2.4% | -0.6% | 2.6% | 5.2% | 4.0% | 3.0% | **46.4%** | -8.2% |
| **2020** | -2.7% | -8.9% | -1.8% | 7.1% | 8.4% | 3.3% | 8.0% | 11.2% | 0.3% | -10.3% | 11.2% | 3.1% | **29.2%** | -21.6% |
| **2021** | -0.3% | 4.6% | 3.0% | 5.1% | -0.7% | 4.5% | 2.5% | 3.3% | -2.7% | 2.7% | -3.0% | 12.6% | **35.1%** | -13.9% |
| **2022** | -8.3% | -2.3% | 4.2% | -6.6% | 3.0% | -6.5% | 8.4% | -2.6% | -6.3% | 6.5% | 7.7% | -2.6% | **-7.2%** | -20.3% |
| **2023** | 5.5% | -0.9% | 3.7% | -0.2% | 2.7% | 5.7% | 5.0% | -1.6% | -3.0% | -1.2% | 16.2% | 3.3% | **39.7%** | -9.7% |
| **2024** | 1.4% | 5.0% | 1.4% | 0.4% | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | **8.3%** | -5.4% |
| **AVG** | **0.8%** | **1.3%** | **1.7%** | **1.3%** | **1.4%** | **2.4%** | **4.2%** | **1.0%** | **-0.5%** | **0.2%** | **4.7%** | **1.4%** | **21.1%** | **-13.1%** |

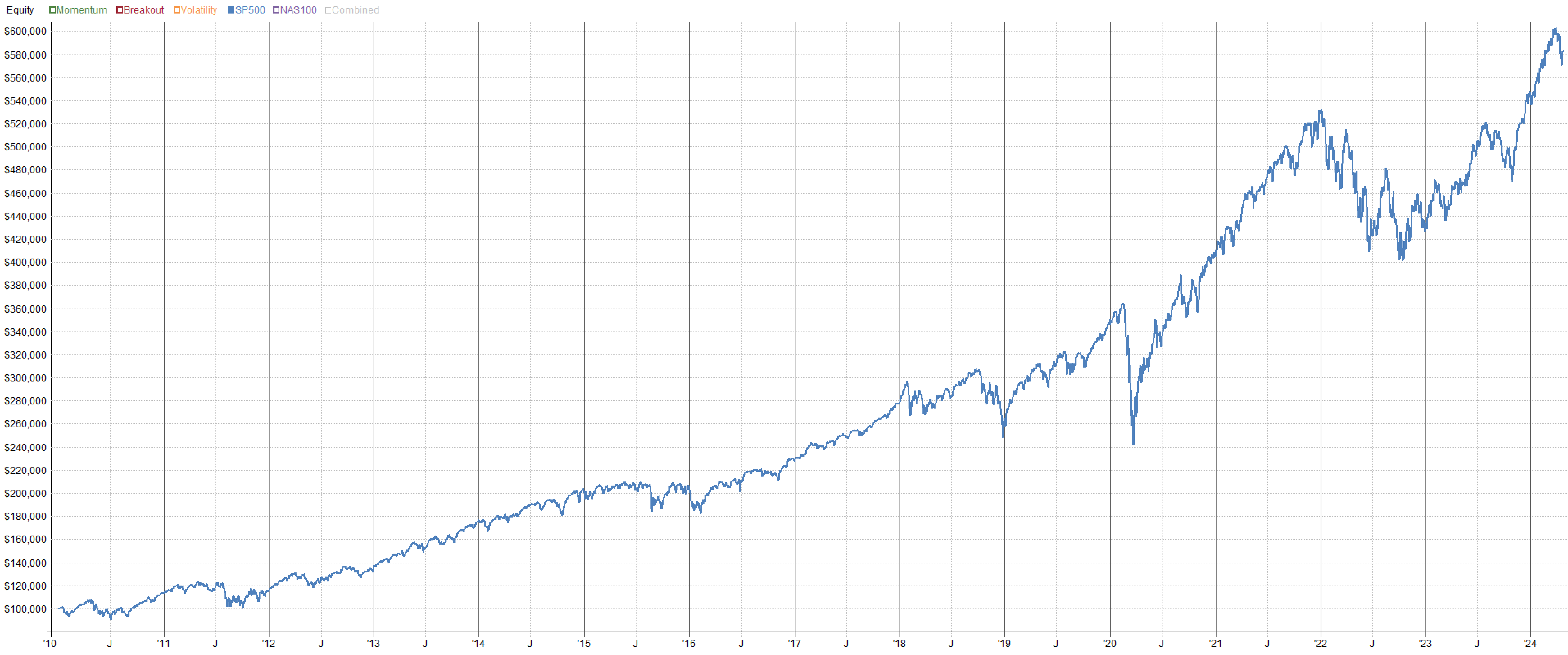

Equity
Momentum
Breakout
Volatility
SP500
NAS100
Combined
$1,300,000
$1,250,000
$1,200,000
$1,150,000
$1,100,000
$1,050,000
$1,000,000
$950,000
$900,000
$850,000
$800,000
$750,000
$700,000
$650,000
$600,000
$550,000
$500,000
$450,000
$400,000
$350,000
$300,000
$250,000
$200,000
$150,000
$100,000
'10
J
'11
J
'12
J
'13
J
'14
J
'15
J
'16
J
'17
J
'18
J
'19
J
'20
J
'21
J
'22
J
'23
J
'24


Equity
Momentum
Breakout
Volatility
SP500
NAS100
Combined
$450,000
$440,000
$430,000
$420,000
$410,000
$400,000
$390,000
$380,000
$370,000
$360,000
$350,000
$340,000
$330,000
$320,000
$310,000
$300,000
$290,000
$280,000
$270,000
$260,000
$250,000
$240,000
$230,000
$220,000
$210,000
$200,000
$190,000
$180,000
$170,000
$160,000
$150,000
$140,000
$130,000
$120,000
$110,000
$100,000
'10
J
'11
J
'12
J
'13
J
'14
J
'15
J
'16
J
'17
J
'18
J
'19
J
'20
J
'21
J
'22
J
'23
J
'24

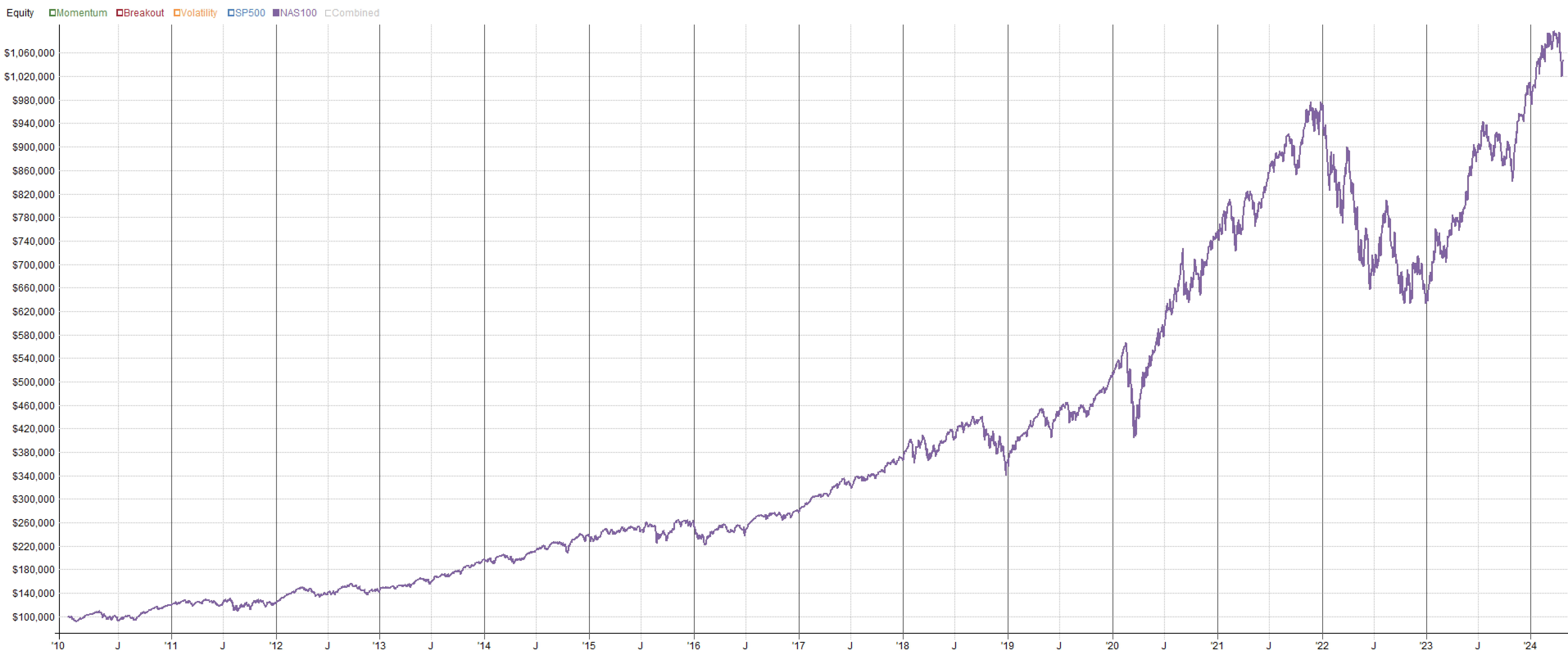


Equity
Momentum
Breakout
Volatility
SP500
NAS100
Combined
$500,000
$480,000
$460,000
$440,000
$420,000
$400,000
$380,000
$360,000
$340,000
$320,000
$300,000
$280,000
$260,000
$240,000
$220,000
$200,000
$180,000
$160,000
$140,000
$120,000
$100,000
'10
J
'11
J
'12
J
'13
J
'14
J
'15
J
'16
J
'17
J
'18
J
'19
J
'20
J
'21
J
'22
J
'23
J
'24


Equity
Momentum
Breakout
Volatility
SP500
NAS100
Combined
$580,000
$560,000
$540,000
$520,000
$500,000
$480,000
$460,000
$440,000
$420,000
$400,000
$380,000
$360,000
$340,000
$320,000
$300,000
$280,000
$260,000
$240,000
$220,000
$200,000
$180,000
$160,000
$140,000
$120,000
$100,000
'10
J
'11
J
'12
J
'13
J
'14
J
'15
J
'16
J
'17
J
'18
J
'19
J
'20
J
'21
J
'22
J
'23
J
'24



Equity
Momentum
Breakout
Volatility
SP500
NAS100
Combined
$600,000
$580,000
$560,000
$540,000
$520,000
$500,000
$480,000
$460,000
$440,000
$420,000
$400,000
$380,000
$360,000
$340,000
$320,000
$300,000
$280,000
$260,000
$240,000
$220,000
$200,000
$180,000
$160,000
$140,000
$120,000
$100,000
'10 J '11 J '12 J '13 J '14 J '15 J '16 J '17 J '18 J '19 J '20 J '21 J '22 J '23 J '24



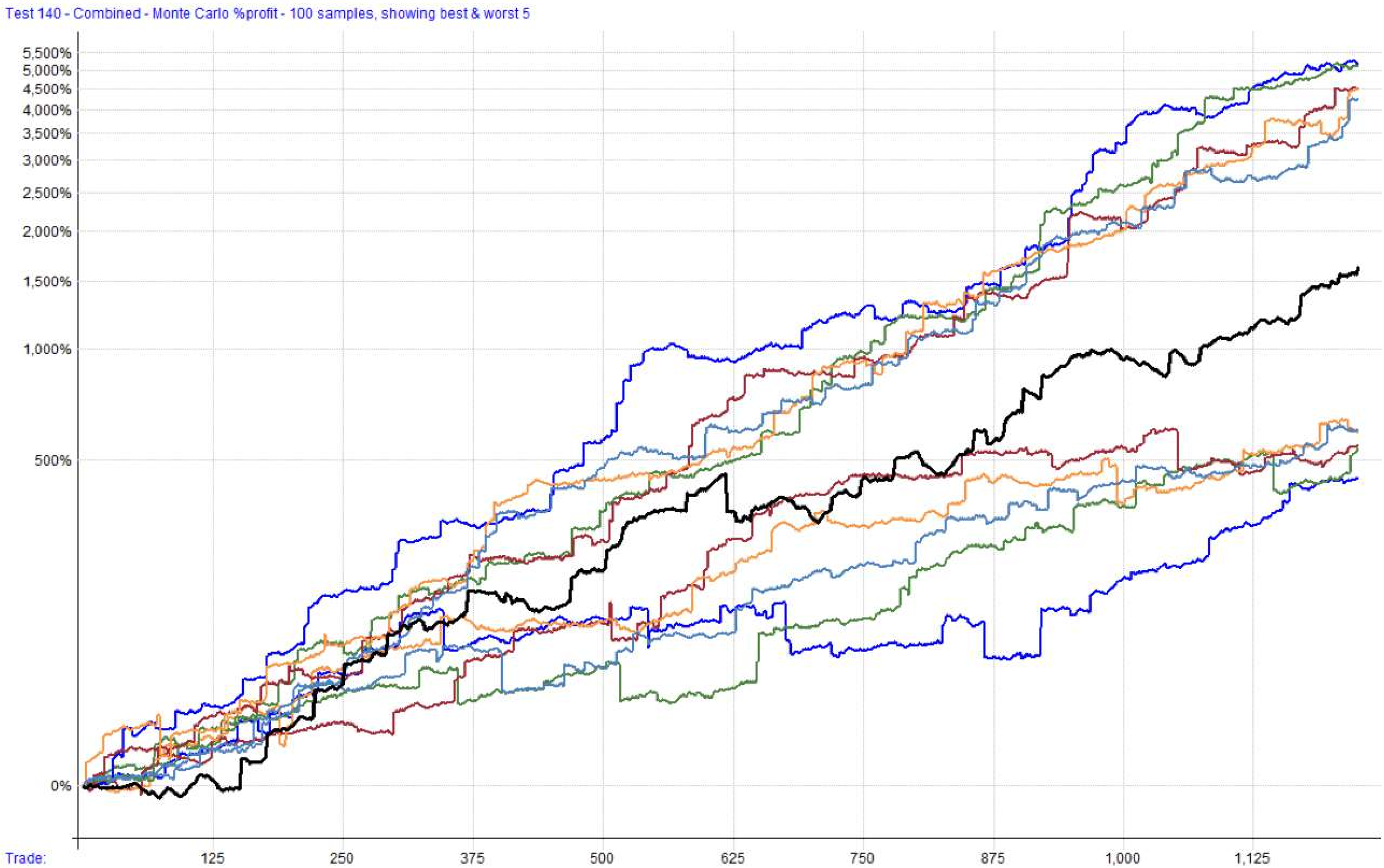
Equity
Momentum
Breakout
Volatility
SP500
NAS100
Combined
$1,060,000
$1,020,000
$980,000
$940,000
$900,000
$860,000
$820,000
$780,000
$740,000
$700,000
$660,000
$620,000
$580,000
$540,000
$500,000
$460,000
$420,000
$380,000
$340,000
$300,000
$260,000
$220,000
$180,000
$140,000
$100,000
'10
J
'11
J
'12
J
'13
J
'14
J
'15
J
'16
J
'17
J
'18
J
'19
J
'20
J
'21
J
'22
J
'23
J
'24

# Strategy Correlations

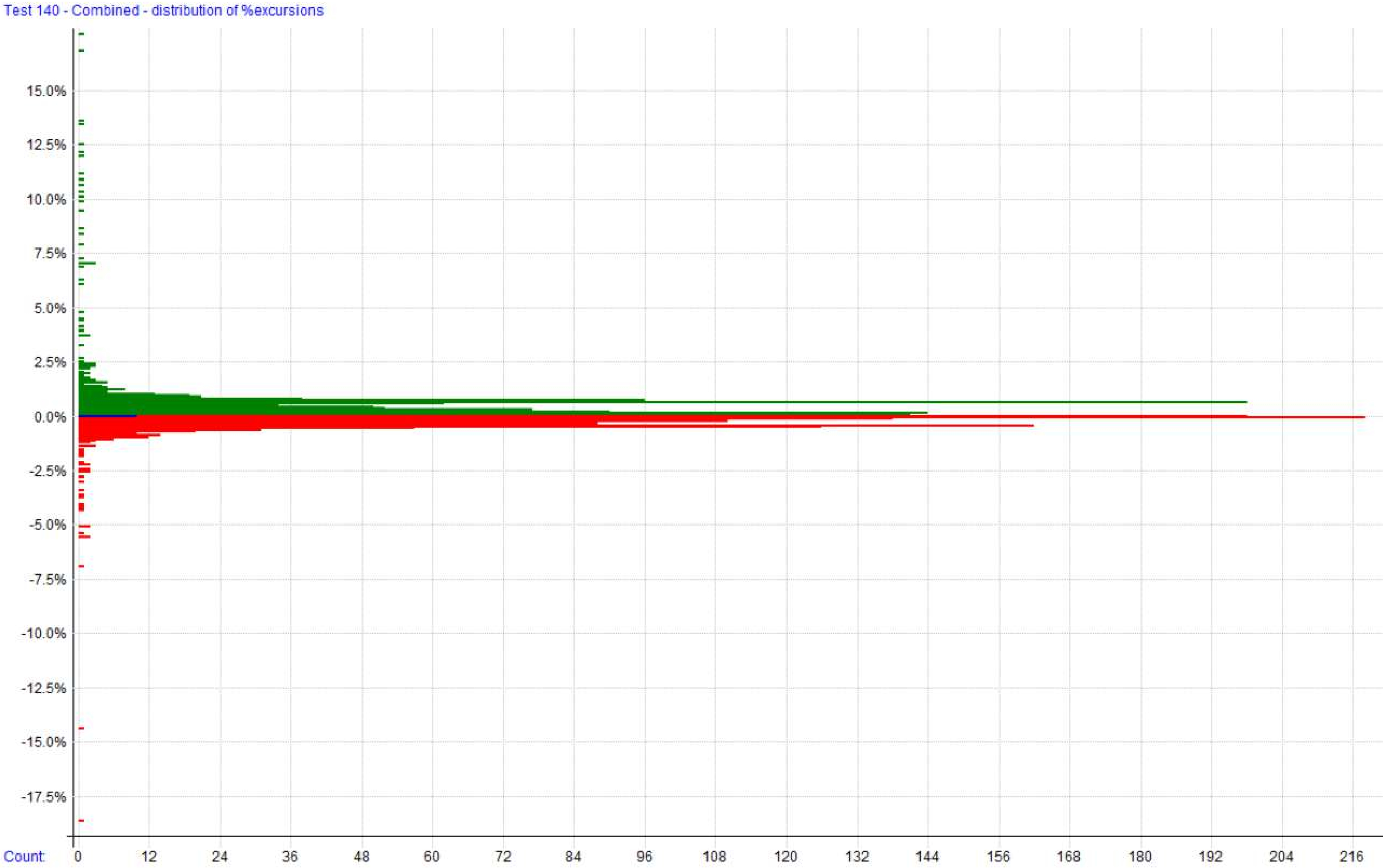
| RETURNS | Momentum | Breakout | Volatility | SP500 | NAS100 | Combined |
|---|---|---|---|---|---|---|
| Momentum | 1.00 | 0.53 | 0.33 | 0.56 | 0.66 | 0.73 |
| Breakout | 0.53 | 1.00 | 0.39 | 0.76 | 0.78 | 0.77 |
| Volatility | 0.33 | 0.39 | 1.00 | 0.40 | 0.40 | 0.82 |
| SP500 | 0.56 | 0.76 | 0.40 | 1.00 | 0.93 | 0.70 |
| NAS100 | 0.66 | 0.78 | 0.40 | 0.93 | 1.00 | 0.74 |
| Combined | 0.73 | 0.77 | 0.82 | 0.70 | 0.74 | 1.00 |

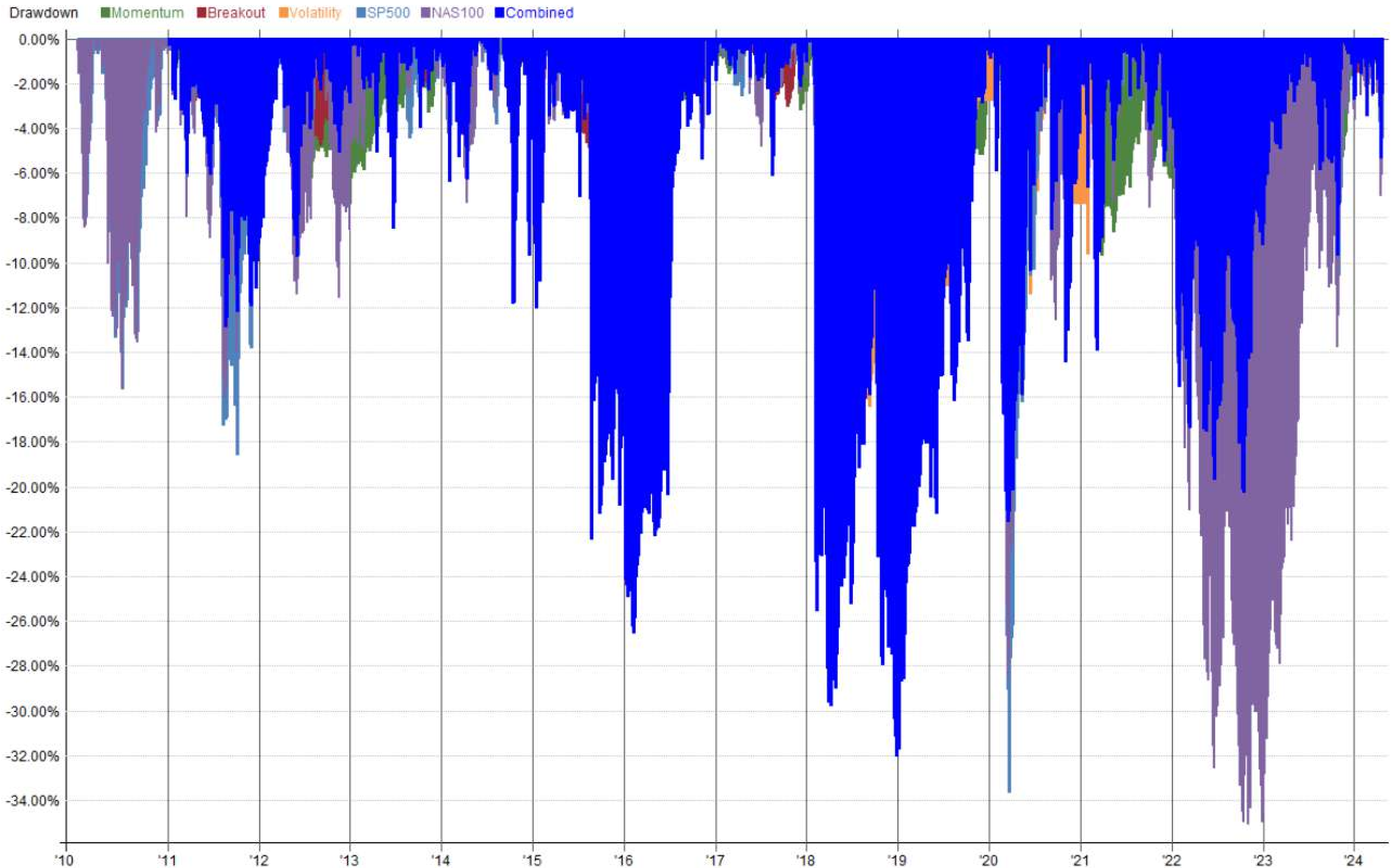
| DRAWDOWNS | Momentum | Breakout | Volatility | SP500 | NAS100 | Combined |
|---|---|---|---|---|---|---|
| Momentum | 1.00 | 0.54 | 0.16 | 0.58 | 0.74 | 0.43 |
| Breakout | 0.54 | 1.00 | 0.26 | 0.63 | 0.62 | 0.63 |
| Volatility | 0.16 | 0.26 | 1.00 | 0.12 | 0.06 | 0.88 |
| SP500 | 0.58 | 0.63 | 0.12 | 1.00 | 0.91 | 0.43 |
| NAS100 | 0.74 | 0.62 | 0.06 | 0.91 | 1.00 | 0.38 |
| Combined | 0.43 | 0.63 | 0.88 | 0.43 | 0.38 | 1.00 |


Test 140 - Combined - distribution of %gains
15.0%
12.5%
10.0%
7.5%
5.0%
2.5%
0.0%
-2.5%
-5.0%
-7.5%
-10.0%
-12.5%
-15.0%
-17.5%
Count
0
9
18
27
36
45
54
63
72
81
90
99
108
117
126
135
144
153
162



Test 140 - Combined - Monte Carlo %profit - 100 samples, showing best & worst 5
5,500%
5,000%
4,500%
4,000%
3,500%
3,000%
2,500%
2,000%
1,500%
1,000%
500%
0%
Trade:
125
250
375
500
625
750
875
1,000
1,125


Test 140 - Combined - distribution of %excursions
15.0%
12.5%
10.0%
7.5%
5.0%
2.5%
0.0%
-2.5%
-5.0%
-7.5%
-10.0%
-12.5%
-15.0%
-17.5%
Count:
0
12
24
36
48
60
72
84
96
108
120
132
144
156
168
180
192
204
216



Drawdown
Momentum
Breakout
Volatility
SP500
NAS100
Combined
0.00%
-2.00%
-4.00%
-6.00%
-8.00%
-10.00%
-12.00%
-14.00%
-16.00%
-18.00%
-20.00%
-22.00%
-24.00%
-26.00%
-28.00%
-30.00%
-32.00%
-34.00%
'10
'11
'12
'13
'14
'15
'16
'17
'18
'19
'20
'21
'22
'23
'24

Test 140 - Combined - Monte Carlo %drawdown - 100 samples, showing worst 5