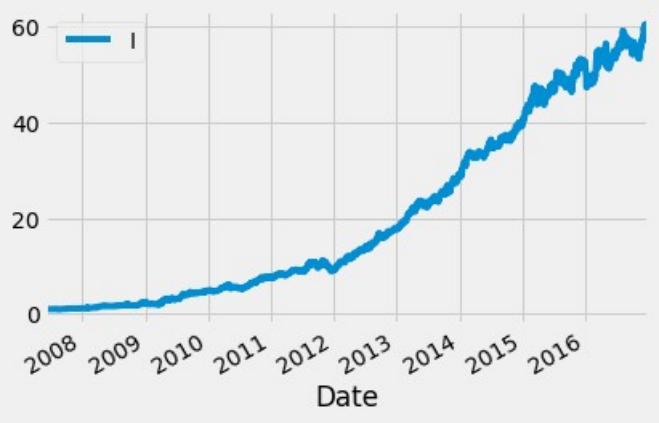
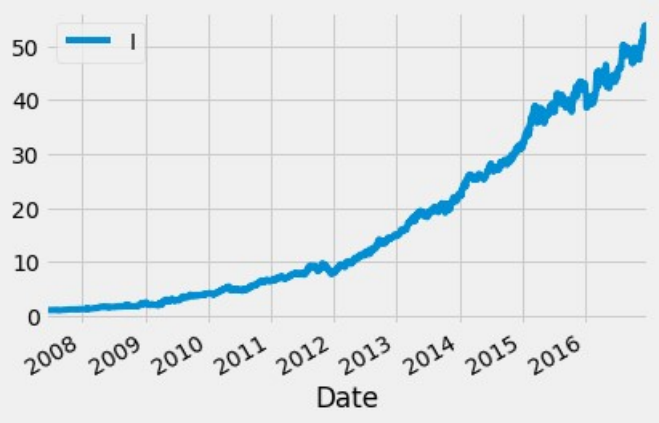
```
In [28]: runfile('E:/GitWorkSpace/v-ratio-momentum-and-ladder/portfolio.py', wdir='E:/
GitWorkSpace/v-ratio-momentum-and-ladder')
Reloaded modules: WhiteRealityCheckFor1, computation_helper, data_helper,
rotational_momentum
requested data history already exists!

==================== (10, '1W-FRI-100%', 3, 1, 1, 0.5, -2) ====================
E:\GitWorkSpace\v-ratio-momentum-and-ladder\computation_helper.py:278: RuntimeWarning:
invalid value encountered in double_scalars
  vratio = t/(lag*b);
```

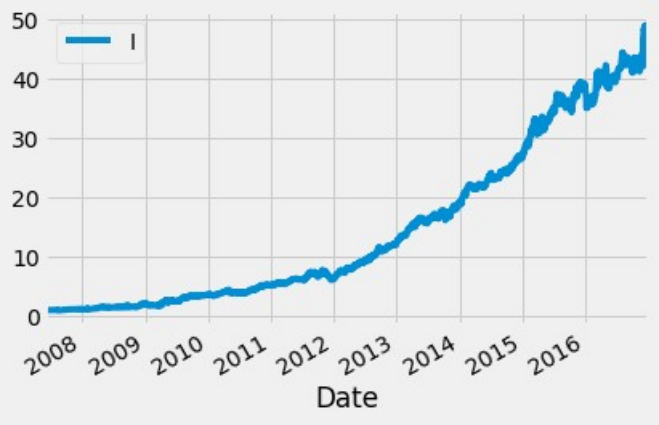



```
TotaAnnReturn = 601.400074
CAGR = 50.460000
Sharpe Ratio = 1.703000
Volatility= 0.272000
number of records for the series after dropping na: 1017
average return 0.005222
[-0.00304712  0.00301415]
Reject Ho = The population distribution of rule returns has an expected value of zero or
less (because p_value is small enough)
p_value:
0.00043999999999999595

==================== (10, '1W-FRI-100%', 3, 1, 1, 0.5, -1.5) ====================
E:\GitWorkSpace\v-ratio-momentum-and-ladder\computation_helper.py:278: RuntimeWarning:
invalid value encountered in double_scalars
  vratio = t/(lag*b);
```

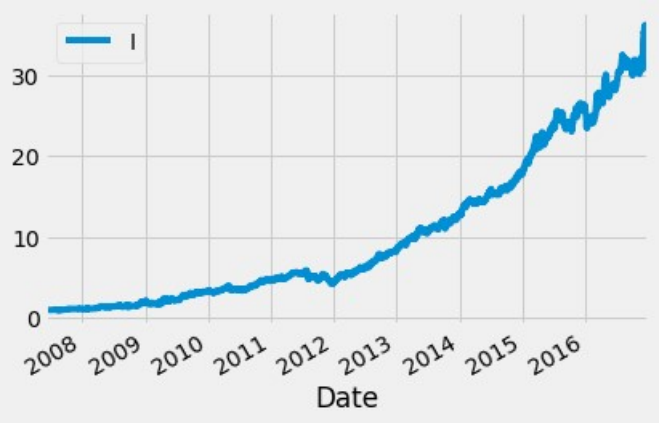



```
TotaAnnReturn = 534.992377
```

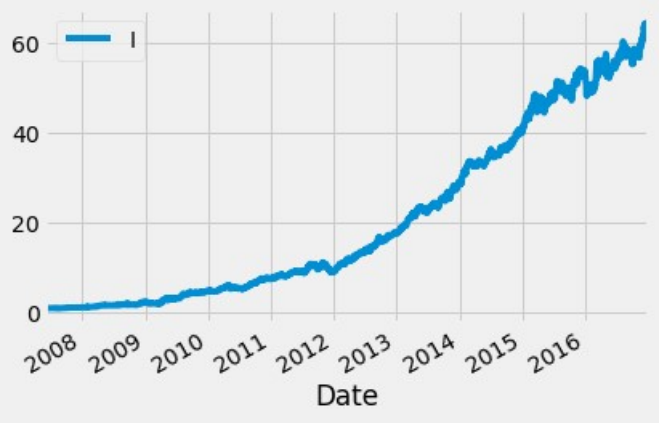
```
CAGR = 48.740000
Sharpe Ratio = 1.648000
Volatility= 0.274000
number of records for the series after dropping na: 1017
average return 0.004884
[-0.0030013   0.00304195]
Reject Ho = The population distribution of rule returns has an expected value of zero or
less (because p_value is small enough)
p_value:
0.0008399999999999519

==================== (10, '1W-FRI-100%', 3, 1, 1, 0.5, -1) ====================
E:\GitWorkSpace\v-ratio-momentum-and-ladder\computation_helper.py:278: RuntimeWarning:
invalid value encountered in double_scalars
  vratio = t/(lag*b);
```




```
TotaAnnReturn = 486.786368
CAGR = 47.370000
Sharpe Ratio = 1.587000
Volatility= 0.279000
number of records for the series after dropping na: 1017
average return 0.004488
[-0.00295262  0.00301221]
Reject Ho = The population distribution of rule returns has an expected value of zero or
less (because p_value is small enough)
p_value:
0.0019799999999999818

==================== (10, '1W-FRI-100%', 3, 1, 1, 0.5, -0.5) ====================
E:\GitWorkSpace\v-ratio-momentum-and-ladder\computation_helper.py:278: RuntimeWarning:
invalid value encountered in double_scalars
  vratio = t/(lag*b);
```

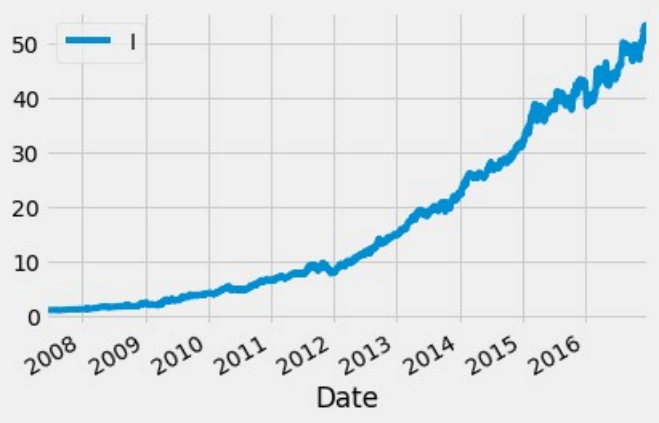



```
TotaAnnReturn = 351.011606
CAGR = 42.750000
Sharpe Ratio = 1.428000
Volatility= 0.290000
number of records for the series after dropping na: 1017
average return 0.004410
[-0.00301833  0.00308251]
Reject Ho = The population distribution of rule returns has an expected value of zero or
less (because p_value is small enough)
p_value:
0.0029000000000000137

==================== (10, '1W-FRI-100%', 3, 1, 1, 1, -2) ====================
E:\GitWorkSpace\v-ratio-momentum-and-ladder\computation_helper.py:278: RuntimeWarning:
invalid value encountered in double_scalars
  vratio = t/(lag*b);
```

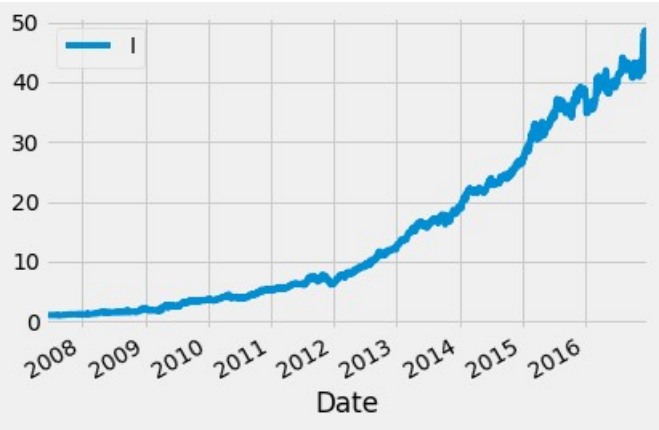



```
TotaAnnReturn = 641.618889
CAGR = 51.420000
Sharpe Ratio = 1.727000
Volatility= 0.272000
number of records for the series after dropping na: 1017
average return 0.005222
[-0.00302401  0.00305587]
Reject Ho = The population distribution of rule returns has an expected value of zero or
less (because p_value is small enough)
p_value:
0.00048000000000003595

==================== (10, '1W-FRI-100%', 3, 1, 1, 1, -1.5) ====================
E:\GitWorkSpace\v-ratio-momentum-and-ladder\computation_helper.py:278: RuntimeWarning:
```

```
invalid value encountered in double_scalars
  vratio = t/(lag*b);
```

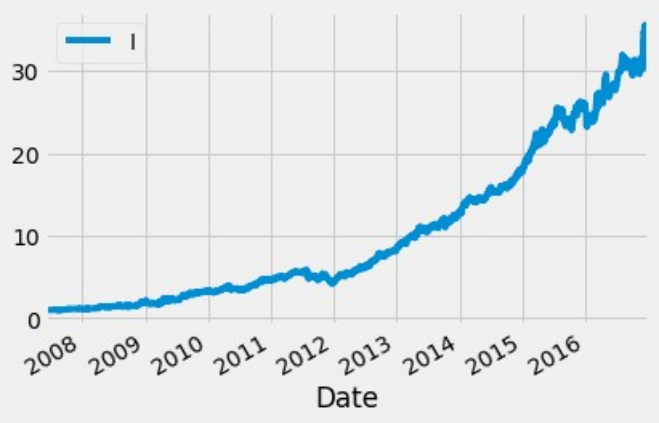



```
TotaAnnReturn = 529.649500
CAGR = 48.600000
Sharpe Ratio = 1.644000
Volatility= 0.274000
number of records for the series after dropping na: 1017
average return 0.004884
[-0.0029944   0.00304813]
Reject Ho = The population distribution of rule returns has an expected value of zero or
less (because p_value is small enough)
p_value:
0.0009000000000000119

==================== (10, '1W-FRI-100%', 3, 1, 1, 1, -1) ====================
E:\GitWorkSpace\v-ratio-momentum-and-ladder\computation_helper.py:278: RuntimeWarning:
invalid value encountered in double_scalars
  vratio = t/(lag*b);
```

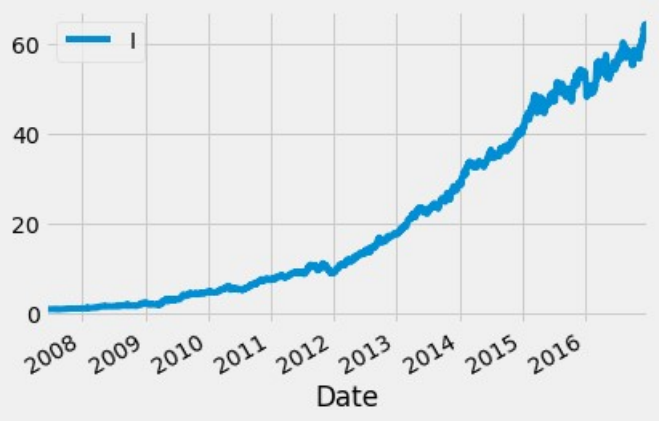



```
TotaAnnReturn = 482.232765
CAGR = 47.240000
Sharpe Ratio = 1.584000
Volatility= 0.279000
number of records for the series after dropping na: 1017
average return 0.004488
[-0.00294225  0.00298399]
Reject Ho = The population distribution of rule returns has an expected value of zero or
less (because p_value is small enough)
p_value:
```

```
0.0019599999999999618

==================== (10, '1W-FRI-100%', 3, 1, 1, 1, -0.5) ====================
E:\GitWorkSpace\v-ratio-momentum-and-ladder\computation_helper.py:278: RuntimeWarning:
invalid value encountered in double_scalars
  vratio = t/(lag*b);
```

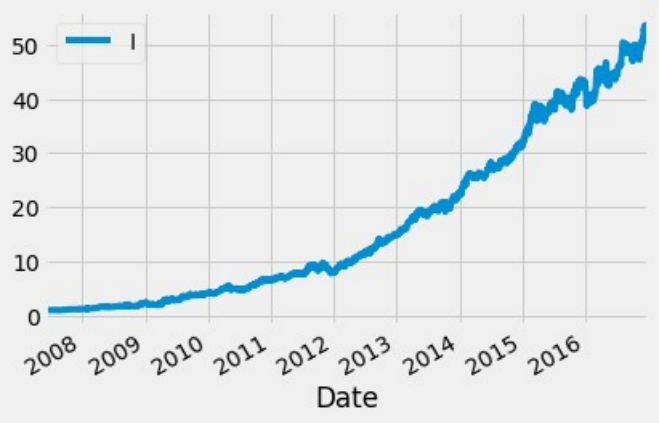



```
TotaAnnReturn = 345.374158
CAGR = 42.520000
Sharpe Ratio = 1.422000
Volatility= 0.290000
number of records for the series after dropping na: 1017
average return 0.004410
[-0.00299742  0.00306616]
Reject Ho = The population distribution of rule returns has an expected value of zero or
less (because p_value is small enough)
p_value:
0.0027000000000000357

==================== (10, '1W-FRI-100%', 3, 1, 1, 1.5, -2) ====================
E:\GitWorkSpace\v-ratio-momentum-and-ladder\computation_helper.py:278: RuntimeWarning:
invalid value encountered in double_scalars
  vratio = t/(lag*b);
```

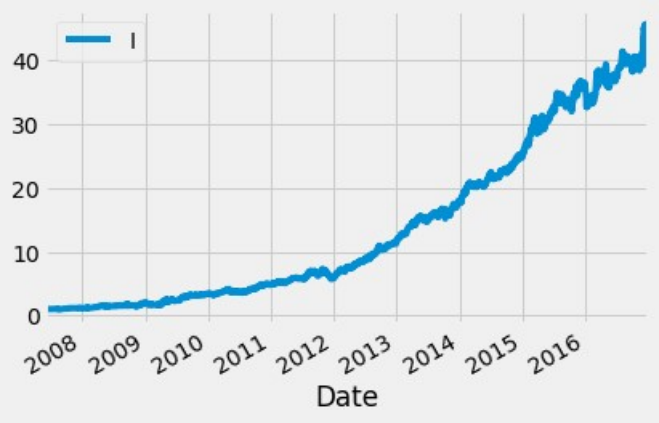



```
TotaAnnReturn = 640.313758
CAGR = 51.390000
Sharpe Ratio = 1.726000
Volatility= 0.272000
number of records for the series after dropping na: 1017
average return 0.005222
[-0.00299905  0.00304292]
```

```
Reject Ho = The population distribution of rule returns has an expected value of zero or
less (because p_value is small enough)
p_value:
0.00034000000000000696

==================== (10, '1W-FRI-100%', 3, 1, 1, 1.5, -1.5) ====================
E:\GitWorkSpace\v-ratio-momentum-and-ladder\computation_helper.py:278: RuntimeWarning:
invalid value encountered in double_scalars
  vratio = t/(lag*b);
```

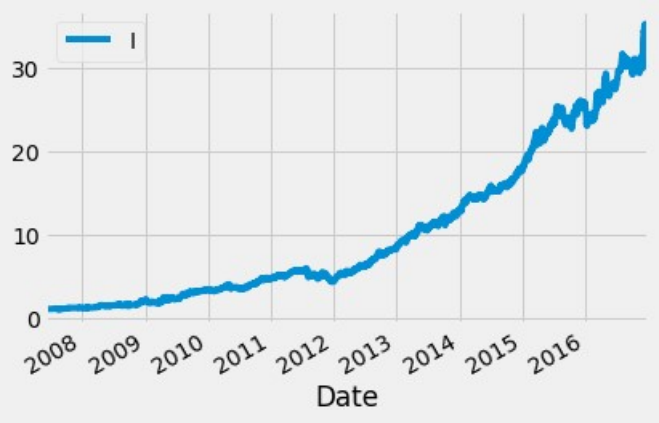



```
TotaAnnReturn = 532.184173
CAGR = 48.670000
Sharpe Ratio = 1.644000
Volatility= 0.275000
number of records for the series after dropping na: 1017
average return 0.004897
[-0.0030248   0.00306069]
Reject Ho = The population distribution of rule returns has an expected value of zero or
less (because p_value is small enough)
p_value:
0.0008000000000000229

==================== (10, '1W-FRI-100%', 3, 1, 1, 1.5, -1) ====================
E:\GitWorkSpace\v-ratio-momentum-and-ladder\computation_helper.py:278: RuntimeWarning:
invalid value encountered in double_scalars
  vratio = t/(lag*b);
```

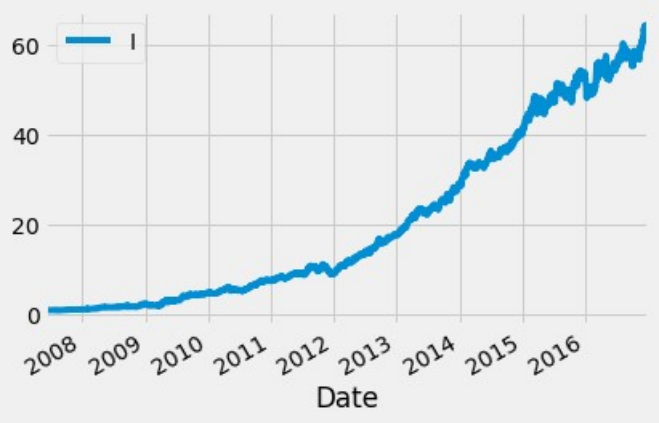



```
TotaAnnReturn = 452.135957
CAGR = 46.310000
Sharpe Ratio = 1.554000
Volatility= 0.281000
```

```
number of records for the series after dropping na: 1017
average return 0.004337
[-0.00294091  0.00305999]
Reject Ho = The population distribution of rule returns has an expected value of zero or
less (because p_value is small enough)
p_value:
0.0029000000000000137

==================== (10, '1W-FRI-100%', 3, 1, 1, 1.5, -0.5) ====================
E:\GitWorkSpace\v-ratio-momentum-and-ladder\computation_helper.py:278: RuntimeWarning:
invalid value encountered in double_scalars
  vratio = t/(lag*b);
```

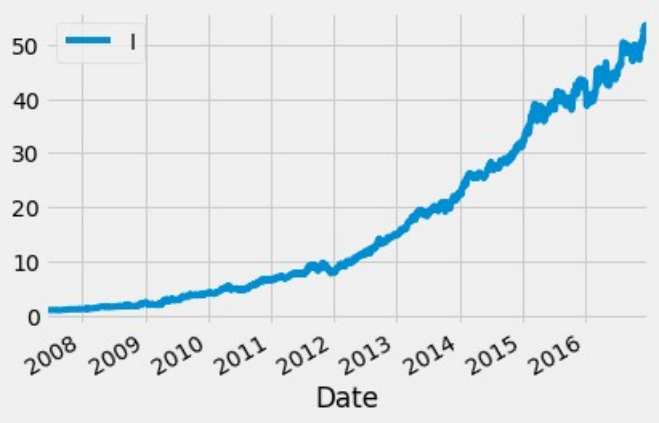



```
TotaAnnReturn = 342.047428
CAGR = 42.390000
Sharpe Ratio = 1.418000
Volatility= 0.290000
number of records for the series after dropping na: 1017
average return 0.004410
[-0.00303506  0.00305355]
Reject Ho = The population distribution of rule returns has an expected value of zero or
less (because p_value is small enough)
p_value:
0.0026000000000000467

==================== (10, '1W-FRI-100%', 3, 1, 1, 2, -2) ====================
E:\GitWorkSpace\v-ratio-momentum-and-ladder\computation_helper.py:278: RuntimeWarning:
invalid value encountered in double_scalars
  vratio = t/(lag*b);
```

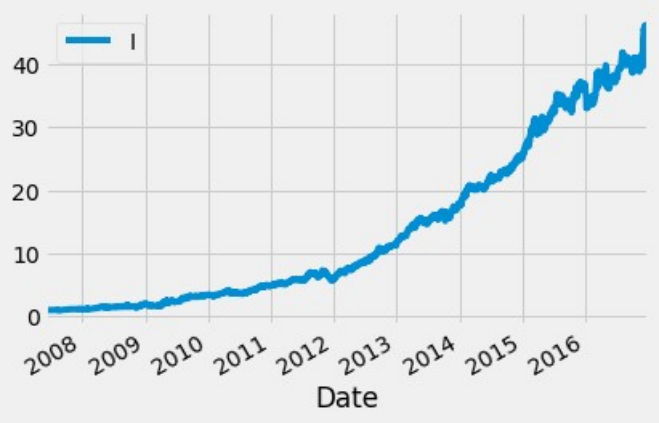



```
TotaAnnReturn = 640.313758
```

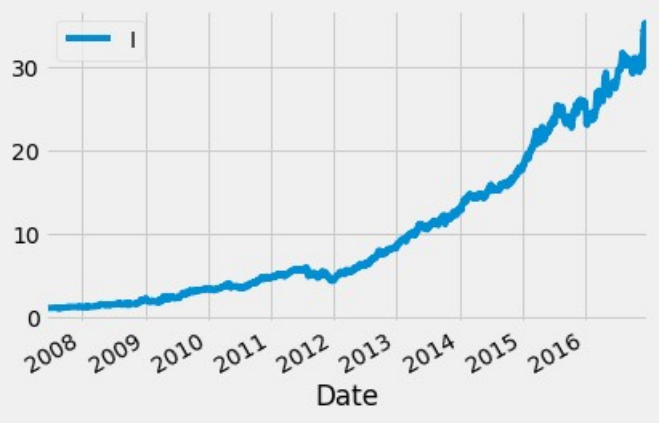
```
CAGR = 51.390000
Sharpe Ratio = 1.726000
Volatility= 0.272000
number of records for the series after dropping na: 1017
average return 0.005222
[-0.00302036  0.00305515]
Reject Ho = The population distribution of rule returns has an expected value of zero or
less (because p_value is small enough)
p_value:
0.00048000000000003595

==================== (10, '1W-FRI-100%', 3, 1, 1, 2, -1.5) ====================
E:\GitWorkSpace\v-ratio-momentum-and-ladder\computation_helper.py:278: RuntimeWarning:
invalid value encountered in double_scalars
  vratio = t/(lag*b);
```




```
TotaAnnReturn = 532.184173
CAGR = 48.670000
Sharpe Ratio = 1.644000
Volatility= 0.275000
number of records for the series after dropping na: 1017
average return 0.004897
[-0.0029937   0.00306035]
Reject Ho = The population distribution of rule returns has an expected value of zero or
less (because p_value is small enough)
p_value:
0.0007800000000000029

==================== (10, '1W-FRI-100%', 3, 1, 1, 2, -1) ====================
E:\GitWorkSpace\v-ratio-momentum-and-ladder\computation_helper.py:278: RuntimeWarning:
invalid value encountered in double_scalars
  vratio = t/(lag*b);
```




```
TotaAnnReturn = 457.549724
CAGR = 46.480000
Sharpe Ratio = 1.558000
Volatility= 0.281000
number of records for the series after dropping na: 1017
average return 0.004337
[-0.00293947  0.00301529]
Reject Ho = The population distribution of rule returns has an expected value of zero or
less (because p_value is small enough)
p_value:
0.0026399999999999757

==================== (10, '1W-FRI-100%', 3, 1, 1, 2, -0.5) ====================
E:\GitWorkSpace\v-ratio-momentum-and-ladder\computation_helper.py:278: RuntimeWarning:
invalid value encountered in double_scalars
  vratio = t/(lag*b);
```




```
TotaAnnReturn = 342.047428
CAGR = 42.390000
Sharpe Ratio = 1.418000
Volatility= 0.290000
number of records for the series after dropping na: 1017
average return 0.004410
[-0.00302425  0.00305353]
Reject Ho = The population distribution of rule returns has an expected value of zero or
less (because p_value is small enough)
p_value:
0.0028000000000000247
```

In [29]: