

# Backtest Report

Algotrade

January 8, 2024

## 1 Stock Filter

In this backtesting report, the following criteria are used to filter stocks.

$$OCF3YA = \frac{OperatingCashflow(Year0) + OperatingCashflow(Year1) + OperatingCashflow(Year2)}{3}$$

$$OCF12QG = \frac{OperatingCashFlow(QuarterT0)}{OperatingCashFlow(QuarterT - 12)} - 1$$

$$ROE = \frac{NetIncome}{ShareholdersEquity}$$

$$DebtPay = PrincipalPayment(4Q) + ProceedsFromBorrowings(4Q)$$

The initial filter recommended by experts is:

$$0.00 < OCF3YA < \infty$$

$$0.21 < OCF12QG < \infty$$

$$0.07 < ROE < \infty$$

$$-\infty < DebtPay < 0.00$$

## 2 Backtest Settings

In-sample period: from 2018-07-01 to 2020-12-31

Out-of-sample period: from 2021-01-01 to 2024-01-01

Target number of stocks in portfolio: 5

Only select stock with daily trade value larger than: 10 Billion VND

Rebalance Interval: relativedelta(months=+1)

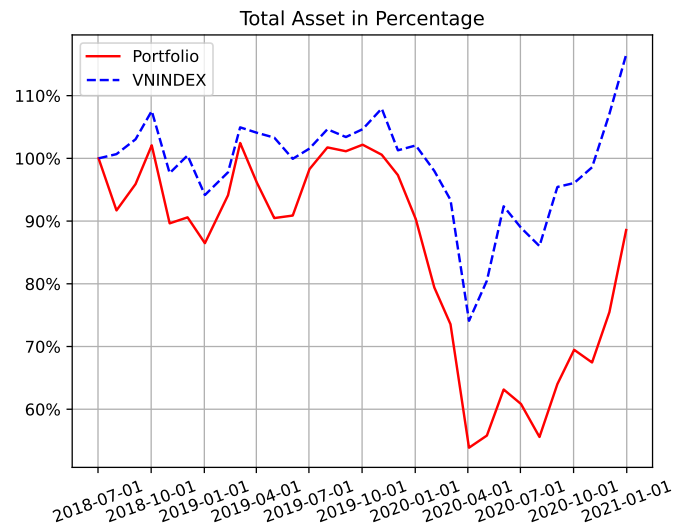
Annualized factor: 12

Fee rate: 0.03%

Using VNINDEX as benchmark to evaluate portfolio performance.

### 3 Evaluate initial filter on in-sample period

#### 3.1 Performance Measurement



- Total Excess Return: -27.97%
- Total Absolute Return: Portfolio: -11.43%, VNINDEX: 16.55%
- Expected Annual Excess Return: -12.30%
- Maximum Drawdown: Portfolio: -47.43%, VNINDEX: -31.36%
- Sharpe Ratio: Portfolio: -0.0725, VNINDEX: 0.2510
- Sortino Ratio (MAR=7%): Portfolio: -0.2588, VNINDEX: 0.1115
- Information Ratio: -0.4941
- Average Periodically Number of Stocks: 2.70
- Periodically Excess Returns: Min: -8.98%, Max: 8.51%, Mean: -0.69%, Standard deviation: 4.86%

### 3.2 Restructuring Table

No.	Stock	Sector	Count over 30 periods	Total Excess Return Contribution	2018-07-02	2018-08-02	2018-09-04	2018-10-02	2018-11-02	2018-12-03	2019-01-02	2019-02-11	2019-03-04	2019-04-02	2019-05-02	2019-06-03	2019-07-02	2019-08-02	2019-09-03	2019-10-02	2019-11-04	2019-12-02	2020-01-02	2020-02-03	2020-03-02	2020-04-03	2020-05-04	2020-06-02	2020-07-02	2020-08-03	2020-09-03	2020-10-02	2020-11-02	2020-12-02		
					-8.98%	2.23%	2.05%	-2.97%	-1.82%	1.74%	4.99%	1.82%	-5.37%	-5.12%	3.72%	6.51%	0.50%	0.58%	-0.18%	-4.72%	2.94%	-7.99%	-8.07%	-2.67%	-6.12%	-5.04%	-1.57%	0.05%	-5.36%	4.23%	7.87%	-5.53%	3.28%	8.51%		
1	PDR	Real Estate Investment and Services	6	-6.37%	o	o	o	o	o	o																										
2	VCS	Construction and Materials	9	-4.70%	o	o	o	o	o	o	o	o	o																							
3	BMP	Chemicals	1	-1.27%																																
4	DHG	Pharmaceuticals and Biotechnology	1	-1.02%			o																													
5	VSC	Industrial Transportation	1	0.20%				o																												
6	VGC	Construction and Materials	3	3.96%						o	o	o																								
7	TCM	Personal Goods	8	-3.75%									o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o
8	NDN	Real Estate Investment and Services	3	3.04%																																
9	GAS	Gas, Water and Multi-utilities	12	-9.31%														o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o
10	KBC	Real Estate Investment and Services	9	1.26%														o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o
11	VHC	Food Producers	5	2.06%														o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o
12	MSN	Food Producers	3	-7.97%																																
13	REE	Industrial Engineering	6	-5.41%																																
14	SAB	Beverages	2	-1.14%																																
15	ACV	Industrial Transportation	2	-1.42%																																
16	OGC	Real Estate Investment and Services	1	2.54%																																
17	DPM	Chemicals	3	-2.51%																																
18	HT1	Construction and Materials	2	-1.49%																																
19	PVT	Industrial Transportation	3	-1.37%																																
20	IJC	Real Estate Investment and Services	1	6.71%																																

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### 3.3 Criteria Value Table

No.	Stock	Sector	Count over 30 periods	Total Excess Return Contribution	OCF3YA			OCF12QG			ROE			DebtPay		
					min	median	max	min	median	max	min	median	max	min	median	max
1	PDR	Real Estate Investment and Services	6	-6.37%	663.33B	705.89B	748.44B	0.51	10.56	20.60	0.20	0.20	0.20	-3.26T	-3.26T	-3.26T
2	VCS	Construction and Materials	9	-4.70%	213.26B	574.48B	637.91B	0.25	76.34	84.85	0.41	0.43	0.58	-305.04B	-194.24B	-31.69B
3	BMP	Chemicals	1	-1.27%	439.56B	439.56B	439.56B	2.27	2.27	2.27	0.20	0.20	0.20	-46.03B	-46.03B	-46.03B
4	DHG	Pharmaceuticals and Biotechnology	1	-1.02%	564.00B	564.00B	564.00B	0.66	0.66	0.66	0.20	0.20	0.20	-63.68B	-63.68B	-63.68B
5	VSC	Industrial Transportation	1	0.20%	387.03B	387.03B	387.03B	0.34	0.34	0.34	0.19	0.19	0.19	-194.19B	-194.19B	-194.19B
6	VGC	Construction and Materials	3	3.96%	1.08T	1.08T	1.08T	0.64	0.64	0.64	0.09	0.09	0.09	-50.94B	-50.94B	-50.94B
7	TCM	Personal Goods	8	-3.75%	204.06B	244.16B	344.49B	0.23	0.41	9.84	0.15	0.18	0.22	-292.30B	-201.71B	-10.28B
8	NDN	Real Estate Investment and Services	3	3.04%	293.52B	293.52B	293.52B	68.03	68.03	68.03	0.13	0.13	0.16	-9.72B	-9.72B	-9.72B
9	GAS	Gas, Water and Multi-utilities	12	-9.31%	11.30T	12.20T	12.59T	0.47	0.84	2.44	0.20	0.26	0.26	-4.89T	-3.86T	-1.09T
10	KBC	Real Estate Investment and Services	9	1.26%	457.70B	473.25B	576.51B	0.24	0.27	10.53	0.07	0.10	0.10	-581.57B	-491.75B	-403.31B
11	VHC	Food Producers	5	2.06%	840.87B	999.50B	999.50B	1.67	1.89	1.89	0.22	0.22	0.46	-378.94B	-378.94B	-58.56B
12	MSN	Food Producers	3	-7.97%	3.36T	3.36T	3.36T	3.76	3.76	3.76	0.15	0.15	0.15	-11.06T	-11.06T	-11.06T
13	REE	Industrial Engineering	6	-5.41%	343.70B	405.46B	467.22B	2.39	3.58	4.76	0.15	0.16	0.16	-4.54T	-3.71T	-2.87T
14	SAB	Beverages	2	-1.14%	4.86T	4.86T	4.86T	0.99	0.99	0.99	0.30	0.30	0.30	-110.51B	-110.51B	-110.51B
15	ACV	Industrial Transportation	2	-1.42%	7.13T	7.40T	7.67T	0.59	1.52	2.46	0.22	0.23	0.24	-199.56B	-177.28B	-154.99B
16	OGC	Real Estate Investment and Services	1	2.54%	171.55B	171.55B	171.55B	1.79	1.79	1.79	0.28	0.28	0.28	-219.70B	-219.70B	-219.70B
17	DPM	Chemicals	3	-2.51%	955.69B	955.69B	955.69B	0.91	0.91	0.91	0.09	0.09	0.09	-104.50B	-104.50B	-104.50B
18	HT1	Construction and Materials	2	-1.49%	1.28T	1.28T	1.28T	1.75	1.75	1.75	0.13	0.13	0.13	-856.88B	-856.88B	-856.88B
19	PVT	Industrial Transportation	3	-1.37%	1.02T	1.02T	1.02T	3.09	3.09	3.09	0.13	0.13	0.13	-231.08B	-231.08B	-231.08B
20	IJC	Real Estate Investment and Services	1	6.71%	480.40B	480.40B	480.40B	0.32	0.32	0.32	0.14	0.14	0.14	-810.39B	-810.39B	-810.39B

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## 4 Optimization using data in in-sample period

Split the in-sample period into two sub-periods:

- Training period: from 2018-07-02 to 2020-07-02
- Validation period: from 2020-07-02 to 2020-12-31

### 4.1 Performance measurement on training period (top 30):

Criteria	Sharpe Ratio	Sortino Ratio (mar=7%)	Info Ratio	Total ER	Annual ER	Avg Periodically ER	Maximum Draw-down	Avg Periodically No.Stocks
$0.00 < OCF3YA < \infty;$ $0.44 < OCF12QG < \infty;$ $0.05 < ROE < \infty;$ $-\infty < DebtPay < \infty$	0.0273	-0.1861	0.5995	12.12%	5.89%	0.56%	-31.20%	6.67
$0.00 < OCF3YA < \infty;$ $0.45 < OCF12QG < \infty;$ $0.05 < ROE < \infty;$ $-\infty < DebtPay < \infty$	0.0273	-0.1861	0.5995	12.12%	5.89%	0.56%	-31.20%	6.67
$0.00 < OCF3YA < \infty;$ $0.46 < OCF12QG < \infty;$ $0.05 < ROE < \infty;$ $-\infty < DebtPay < \infty$	0.0273	-0.1861	0.5995	12.12%	5.89%	0.56%	-31.20%	6.67
$0.00 < OCF3YA < \infty;$ $0.15 < OCF12QG < \infty;$ $0.05 < ROE < \infty;$ $-\infty < DebtPay < \infty$	0.0124	-0.2093	0.6002	11.73%	5.70%	0.53%	-27.91%	7.83
$0.00 < OCF3YA < \infty;$ $0.16 < OCF12QG < \infty;$ $0.05 < ROE < \infty;$ $-\infty < DebtPay < \infty$	0.0124	-0.2093	0.6002	11.73%	5.70%	0.53%	-27.91%	7.83
$0.00 < OCF3YA < \infty;$ $0.17 < OCF12QG < \infty;$ $0.05 < ROE < \infty;$ $-\infty < DebtPay < \infty$	0.0124	-0.2093	0.6002	11.73%	5.70%	0.53%	-27.91%	7.83
$0.00 < OCF3YA < \infty;$ $0.18 < OCF12QG < \infty;$ $0.05 < ROE < \infty;$ $-\infty < DebtPay < \infty$	0.0124	-0.2093	0.6002	11.73%	5.70%	0.53%	-27.91%	7.83
$0.00 < OCF3YA < \infty;$ $0.19 < OCF12QG < \infty;$ $0.05 < ROE < \infty;$ $-\infty < DebtPay < \infty$	0.0124	-0.2093	0.6002	11.73%	5.70%	0.53%	-27.91%	7.83
$0.00 < OCF3YA < \infty;$ $0.20 < OCF12QG < \infty;$ $0.05 < ROE < \infty;$ $-\infty < DebtPay < \infty$	0.0124	-0.2093	0.6002	11.73%	5.70%	0.53%	-27.91%	7.83
$0.00 < OCF3YA < \infty;$ $0.21 < OCF12QG < \infty;$ $0.05 < ROE < \infty;$ $-\infty < DebtPay < \infty$	0.0124	-0.2093	0.6002	11.73%	5.70%	0.53%	-27.91%	7.83
$0.00 < OCF3YA < \infty;$ $0.22 < OCF12QG < \infty;$ $0.05 < ROE < \infty;$ $-\infty < DebtPay < \infty$	0.0124	-0.2093	0.6002	11.73%	5.70%	0.53%	-27.91%	7.83

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Criteria	Sharpe Ratio	Sortino Ratio (mar=7%)	Info Ratio	Total ER	Annual ER	Avg Periodically ER	Maximum Draw-down	Avg Periodically No.Stocks
$0.00 < OCF3YA < \infty;$ $0.44 < OCF12QG < \infty;$ $0.03 < ROE < \infty;$ $-\infty < DebtPay < \infty$	0.0176	-0.2008	0.5737	11.71%	5.69%	0.54%	-30.84%	7.00
$0.00 < OCF3YA < \infty;$ $0.44 < OCF12QG < \infty;$ $0.04 < ROE < \infty;$ $-\infty < DebtPay < \infty$	0.0176	-0.2008	0.5737	11.71%	5.69%	0.54%	-30.84%	7.00
$0.00 < OCF3YA < \infty;$ $0.45 < OCF12QG < \infty;$ $0.03 < ROE < \infty;$ $-\infty < DebtPay < \infty$	0.0176	-0.2008	0.5737	11.71%	5.69%	0.54%	-30.84%	7.00
$0.00 < OCF3YA < \infty;$ $0.45 < OCF12QG < \infty;$ $0.04 < ROE < \infty;$ $-\infty < DebtPay < \infty$	0.0176	-0.2008	0.5737	11.71%	5.69%	0.54%	-30.84%	7.00
$0.00 < OCF3YA < \infty;$ $0.46 < OCF12QG < \infty;$ $0.03 < ROE < \infty;$ $-\infty < DebtPay < \infty$	0.0176	-0.2008	0.5737	11.71%	5.69%	0.54%	-30.84%	7.00
$0.00 < OCF3YA < \infty;$ $0.46 < OCF12QG < \infty;$ $0.04 < ROE < \infty;$ $-\infty < DebtPay < \infty$	0.0176	-0.2008	0.5737	11.71%	5.69%	0.54%	-30.84%	7.00
$0.00 < OCF3YA < \infty;$ $0.13 < OCF12QG < \infty;$ $0.05 < ROE < \infty;$ $-\infty < DebtPay < \infty$	0.0113	-0.2109	0.5977	11.68%	5.68%	0.53%	-27.95%	7.92
$0.00 < OCF3YA < \infty;$ $0.14 < OCF12QG < \infty;$ $0.05 < ROE < \infty;$ $-\infty < DebtPay < \infty$	0.0113	-0.2109	0.5977	11.68%	5.68%	0.53%	-27.95%	7.92
$0.00 < OCF3YA < \infty;$ $0.07 < OCF12QG < \infty;$ $0.05 < ROE < \infty;$ $-\infty < DebtPay < \infty$	0.0031	-0.2234	0.5691	11.29%	5.49%	0.51%	-28.23%	8.21
$0.00 < OCF3YA < \infty;$ $0.08 < OCF12QG < \infty;$ $0.05 < ROE < \infty;$ $-\infty < DebtPay < \infty$	-0.0017	-0.2299	0.5553	11.05%	5.38%	0.50%	-28.40%	8.17
$0.00 < OCF3YA < \infty;$ $0.09 < OCF12QG < \infty;$ $0.05 < ROE < \infty;$ $-\infty < DebtPay < \infty$	-0.0017	-0.2299	0.5553	11.05%	5.38%	0.50%	-28.40%	8.17
$0.00 < OCF3YA < \infty;$ $0.10 < OCF12QG < \infty;$ $0.05 < ROE < \infty;$ $-\infty < DebtPay < \infty$	-0.0017	-0.2299	0.5553	11.05%	5.38%	0.50%	-28.40%	8.17
$0.00 < OCF3YA < \infty;$ $0.11 < OCF12QG < \infty;$ $0.05 < ROE < \infty;$ $-\infty < DebtPay < \infty$	-0.0017	-0.2299	0.5553	11.05%	5.38%	0.50%	-28.40%	8.17

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Criteria	Sharpe Ratio	Sortino Ratio (mar=7%)	Info Ratio	Total ER	Annual ER	Avg Periodically ER	Maximum Draw-down	Avg Periodically No.Stocks
$0.00 < OCF3YA < \infty;$ $0.13 < OCF12QG < \infty;$ $0.04 < ROE < \infty;$ $-\infty < DebtPay < \infty$	-0.0107	-0.2416	0.5423	10.69%	5.21%	0.48%	-28.00%	8.25
$0.00 < OCF3YA < \infty;$ $0.14 < OCF12QG < \infty;$ $0.04 < ROE < \infty;$ $-\infty < DebtPay < \infty$	-0.0107	-0.2416	0.5423	10.69%	5.21%	0.48%	-28.00%	8.25
$0.00 < OCF3YA < \infty;$ $0.15 < OCF12QG < \infty;$ $0.04 < ROE < \infty;$ $-\infty < DebtPay < \infty$	-0.0107	-0.2414	0.5422	10.69%	5.21%	0.48%	-28.00%	8.17
$0.00 < OCF3YA < \infty;$ $0.16 < OCF12QG < \infty;$ $0.04 < ROE < \infty;$ $-\infty < DebtPay < \infty$	-0.0107	-0.2414	0.5422	10.69%	5.21%	0.48%	-28.00%	8.17
$0.00 < OCF3YA < \infty;$ $0.17 < OCF12QG < \infty;$ $0.04 < ROE < \infty;$ $-\infty < DebtPay < \infty$	-0.0107	-0.2414	0.5422	10.69%	5.21%	0.48%	-28.00%	8.17
$0.00 < OCF3YA < \infty;$ $0.18 < OCF12QG < \infty;$ $0.04 < ROE < \infty;$ $-\infty < DebtPay < \infty$	-0.0107	-0.2414	0.5422	10.69%	5.21%	0.48%	-28.00%	8.17

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#### 4.2 Performance measurement on validation period (top 30):

Criteria	Sharpe Ratio	Sortino Ratio (mar=7%)	Info Ratio	Total ER	Annual ER	Avg Periodically ER	Maximum Draw-down	Avg Periodically No.Stocks
$0.00 < OCF3YA < \infty;$ $0.26 < OCF12QG < \infty;$ $0.03 < ROE < \infty;$ $-\infty < DebtPay < \infty$	2.9675	15.2677	2.7142	42.50%	103.07%	5.40%	-3.75%	11.50
$0.00 < OCF3YA < \infty;$ $0.26 < OCF12QG < \infty;$ $0.04 < ROE < \infty;$ $-\infty < DebtPay < \infty$	2.9675	15.2677	2.7142	42.50%	103.07%	5.40%	-3.75%	11.50
$0.00 < OCF3YA < \infty;$ $0.26 < OCF12QG < \infty;$ $0.05 < ROE < \infty;$ $-\infty < DebtPay < \infty$	2.9675	15.2677	2.7142	42.50%	103.07%	5.40%	-3.75%	11.50
$0.00 < OCF3YA < \infty;$ $0.27 < OCF12QG < \infty;$ $0.03 < ROE < \infty;$ $-\infty < DebtPay < \infty$	2.9675	15.2677	2.7142	42.50%	103.07%	5.40%	-3.75%	11.50
$0.00 < OCF3YA < \infty;$ $0.27 < OCF12QG < \infty;$ $0.04 < ROE < \infty;$ $-\infty < DebtPay < \infty$	2.9675	15.2677	2.7142	42.50%	103.07%	5.40%	-3.75%	11.50

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Criteria	Sharpe Ratio	Sortino Ratio (mar=7%)	Info Ratio	Total ER	Annual ER	Avg Periodically ER	Maximum Draw-down	Avg Periodically No.Stocks
$0.00 < OCF3YA < \infty;$ $0.27 < OCF12QG < \infty;$ $0.05 < ROE < \infty;$ $-\infty < DebtPay < \infty$	2.9675	15.2677	2.7142	42.50%	103.07%	5.40%	-3.75%	11.50
$0.00 < OCF3YA < \infty;$ $0.28 < OCF12QG < \infty;$ $0.03 < ROE < \infty;$ $-\infty < DebtPay < \infty$	2.9675	15.2677	2.7142	42.50%	103.07%	5.40%	-3.75%	11.50
$0.00 < OCF3YA < \infty;$ $0.28 < OCF12QG < \infty;$ $0.04 < ROE < \infty;$ $-\infty < DebtPay < \infty$	2.9675	15.2677	2.7142	42.50%	103.07%	5.40%	-3.75%	11.50
$0.00 < OCF3YA < \infty;$ $0.28 < OCF12QG < \infty;$ $0.05 < ROE < \infty;$ $-\infty < DebtPay < \infty$	2.9675	15.2677	2.7142	42.50%	103.07%	5.40%	-3.75%	11.50
$0.00 < OCF3YA < \infty;$ $0.29 < OCF12QG < \infty;$ $0.03 < ROE < \infty;$ $-\infty < DebtPay < \infty$	2.9675	15.2677	2.7142	42.50%	103.07%	5.40%	-3.75%	11.50
$0.00 < OCF3YA < \infty;$ $0.29 < OCF12QG < \infty;$ $0.04 < ROE < \infty;$ $-\infty < DebtPay < \infty$	2.9675	15.2677	2.7142	42.50%	103.07%	5.40%	-3.75%	11.50
$0.00 < OCF3YA < \infty;$ $0.29 < OCF12QG < \infty;$ $0.05 < ROE < \infty;$ $-\infty < DebtPay < \infty$	2.9675	15.2677	2.7142	42.50%	103.07%	5.40%	-3.75%	11.50
$0.00 < OCF3YA < \infty;$ $0.30 < OCF12QG < \infty;$ $0.03 < ROE < \infty;$ $-\infty < DebtPay < \infty$	2.9675	15.2677	2.7142	42.50%	103.07%	5.40%	-3.75%	11.50
$0.00 < OCF3YA < \infty;$ $0.30 < OCF12QG < \infty;$ $0.04 < ROE < \infty;$ $-\infty < DebtPay < \infty$	2.9675	15.2677	2.7142	42.50%	103.07%	5.40%	-3.75%	11.50
$0.00 < OCF3YA < \infty;$ $0.30 < OCF12QG < \infty;$ $0.05 < ROE < \infty;$ $-\infty < DebtPay < \infty$	2.9675	15.2677	2.7142	42.50%	103.07%	5.40%	-3.75%	11.50
$0.00 < OCF3YA < \infty;$ $0.31 < OCF12QG < \infty;$ $0.03 < ROE < \infty;$ $-\infty < DebtPay < \infty$	2.9675	15.2677	2.7142	42.50%	103.07%	5.40%	-3.75%	11.50
$0.00 < OCF3YA < \infty;$ $0.31 < OCF12QG < \infty;$ $0.04 < ROE < \infty;$ $-\infty < DebtPay < \infty$	2.9675	15.2677	2.7142	42.50%	103.07%	5.40%	-3.75%	11.50
$0.00 < OCF3YA < \infty;$ $0.31 < OCF12QG < \infty;$ $0.05 < ROE < \infty;$ $-\infty < DebtPay < \infty$	2.9675	15.2677	2.7142	42.50%	103.07%	5.40%	-3.75%	11.50

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Criteria	Sharpe Ratio	Sortino Ratio (mar=7%)	Info Ratio	Total ER	Annual ER	Avg Periodically ER	Maximum Draw-down	Avg Periodically No.Stocks
$0.00 < OCF3YA < \infty;$ $0.26 < OCF12QG < \infty;$ $0.09 < ROE < \infty;$ $-\infty < DebtPay < \infty$	2.9400	14.6565	2.6586	41.49%	100.20%	5.29%	-3.75%	10.00
$0.00 < OCF3YA < \infty;$ $0.27 < OCF12QG < \infty;$ $0.09 < ROE < \infty;$ $-\infty < DebtPay < \infty$	2.9400	14.6565	2.6586	41.49%	100.20%	5.29%	-3.75%	10.00
$0.00 < OCF3YA < \infty;$ $0.28 < OCF12QG < \infty;$ $0.09 < ROE < \infty;$ $-\infty < DebtPay < \infty$	2.9400	14.6565	2.6586	41.49%	100.20%	5.29%	-3.75%	10.00
$0.00 < OCF3YA < \infty;$ $0.29 < OCF12QG < \infty;$ $0.09 < ROE < \infty;$ $-\infty < DebtPay < \infty$	2.9400	14.6565	2.6586	41.49%	100.20%	5.29%	-3.75%	10.00
$0.00 < OCF3YA < \infty;$ $0.30 < OCF12QG < \infty;$ $0.09 < ROE < \infty;$ $-\infty < DebtPay < \infty$	2.9400	14.6565	2.6586	41.49%	100.20%	5.29%	-3.75%	10.00
$0.00 < OCF3YA < \infty;$ $0.31 < OCF12QG < \infty;$ $0.09 < ROE < \infty;$ $-\infty < DebtPay < \infty$	2.9400	14.6565	2.6586	41.49%	100.20%	5.29%	-3.75%	10.00
$0.00 < OCF3YA < \infty;$ $0.24 < OCF12QG < \infty;$ $0.03 < ROE < \infty;$ $-\infty < DebtPay < \infty$	2.9419	14.8432	2.6579	41.42%	100.00%	5.28%	-3.75%	12.00
$0.00 < OCF3YA < \infty;$ $0.24 < OCF12QG < \infty;$ $0.04 < ROE < \infty;$ $-\infty < DebtPay < \infty$	2.9419	14.8432	2.6579	41.42%	100.00%	5.28%	-3.75%	12.00
$0.00 < OCF3YA < \infty;$ $0.24 < OCF12QG < \infty;$ $0.05 < ROE < \infty;$ $-\infty < DebtPay < \infty$	2.9419	14.8432	2.6579	41.42%	100.00%	5.28%	-3.75%	12.00
$0.00 < OCF3YA < \infty;$ $0.25 < OCF12QG < \infty;$ $0.03 < ROE < \infty;$ $-\infty < DebtPay < \infty$	2.9419	14.8432	2.6579	41.42%	100.00%	5.28%	-3.75%	12.00
$0.00 < OCF3YA < \infty;$ $0.25 < OCF12QG < \infty;$ $0.04 < ROE < \infty;$ $-\infty < DebtPay < \infty$	2.9419	14.8432	2.6579	41.42%	100.00%	5.28%	-3.75%	12.00
$0.00 < OCF3YA < \infty;$ $0.25 < OCF12QG < \infty;$ $0.05 < ROE < \infty;$ $-\infty < DebtPay < \infty$	2.9419	14.8432	2.6579	41.42%	100.00%	5.28%	-3.75%	12.00

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After optimization, the refined criteria is:

$$0.00 < OCF3YA < \infty$$

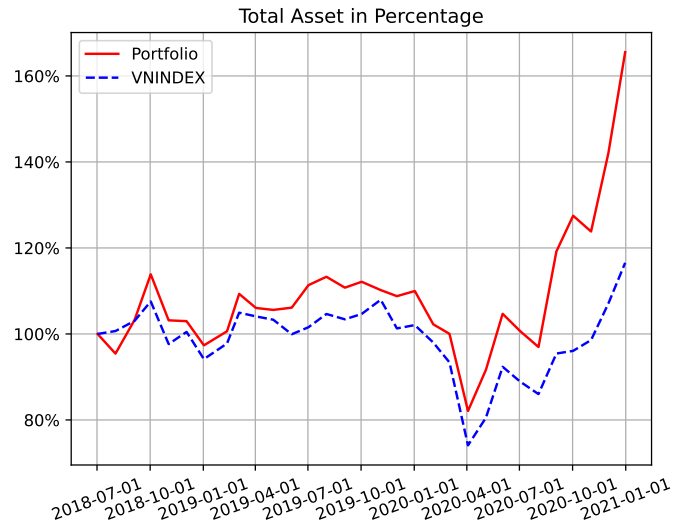
$$0.15 < OCF12QG < \infty$$

$$0.05 < ROE < \infty$$

$$-\infty < DebtPay < \infty$$

### 4.3 Evaluate refined criterion on in-sample period

#### 4.3.1 Performance Measurement



- Total Excess Return: 48.97%
- Total Absolute Return: Portfolio: 65.52%, VNINDEX: 16.55%
- Expected Annual Excess Return: 17.29%
- Maximum Drawdown: Portfolio: -27.91%, VNINDEX: -31.36%
- Sharpe Ratio: Portfolio: 0.7222, VNINDEX: 0.2510
- Sortino Ratio (MAR=7%): Portfolio: 1.0817, VNINDEX: 0.1115
- Information Ratio: 1.1027
- Average Periodically Number of Stocks: 8.90
- Periodically Excess Returns: Min: -5.49%, Max: 11.96%, Mean: 1.30%, Standard deviation: 4.07%

### 4.3.2 Restructuring Table

No.	Stock	Sector	Count over 30 periods	Total Excess Return Contribution	2018-07-02	2018-08-02	2018-09-04	2018-10-02	2018-11-02	2018-12-03	2019-01-02	2019-02-11	2019-03-04	2019-04-02	2019-05-02	2019-06-03	2019-07-02	2019-08-02	2019-09-03	2019-10-02	2019-11-04	2019-12-02	2020-01-02	2020-02-03	2020-03-02	2020-04-03	2020-05-04	2020-06-02	2020-07-02	2020-08-03	2020-09-03	2020-10-02	2020-11-02	2020-12-02				
					-5.25%	5.86%	5.88%	-0.18%	-3.07%	0.82%	-0.49%	1.32%	-2.18%	0.31%	3.77%	3.30%	-1.28%	-1.06%	0.03%	-4.88%	4.89%	0.33%	-3.06%	2.55%	2.72%	3.00%	-0.50%	-0.11%	-0.41%	11.96%	6.31%	-5.49%	6.11%	7.67%				
1	GAS	Gas, Water and Multi-utilities	15	6.26%	o	o	o																															
2	PDR	Real Estate Investment and Services	15	-1.16%	o	o	o	o	o	o																												
3	VCS	Construction and Materials	11	2.96%	o	o	o	o	o	o																												
4	BMP	Chemicals	1	-0.57%				o																														
5	CTI	Construction and Materials	3	1.04%				o	o	o																												
6	CVT	Construction and Materials	1	-0.69%				o																														
7	DGW	Retailers	2	-0.21%				o																														
8	DHG	Pharmaceuticals and Biotechnology	1	-0.48%				o																														
9	FPT	Software and Computer Services	15	3.29%				o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o		
10	HPG	Industrial Metals and Mining	18	3.94%				o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o		
11	KSB	Industrial Metals and Mining	11	4.30%				o																														
12	MPC	Food Producers	4	-0.35%				o	o	o			o																									
13	MWG	Retailers	12	5.76%				o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	
14	VGC	Construction and Materials	5	3.27%				o	o	o	o	o																										
15	VSC	Industrial Transportation	1	0.11%				o																														
16	CTD	Construction and Materials	2	-4.00%							o	o																										
17	PVS	Oil, Gas and Coal	9	2.78%							o	o	o								o	o	o															
18	VNM	Food Producers	15	-1.98%							o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o		
19	NLG	Real Estate Investment and Services	5	2.43%										o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o		
20	TCM	Personal Goods	8	-1.22%																																		
21	TNG	Personal Goods	7	-1.85%																																		
22	ANV	Food Producers	6	0.33%																																		
23	REE	Industrial Engineering	8	-0.25%												o	o																					
24	NDN	Real Estate Investment and Services	3	0.90%													o	o	o																			
25	KBC	Real Estate Investment and Services	12	3.91%													o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o		
26	PNJ	Personal Goods	3	0.70%													o	o	o																			
27	PTB	Construction and Materials	3	-1.06%													o	o	o																			
28	VHC	Food Producers	5	2.92%													o	o																				
29	VIC	Real Estate Investment and Services	3	0.03%													o	o	o																			
30	CEO	Real Estate Investment and Services	1	-0.18%													o																					
31	D2D	Real Estate Investment and Services	4	-1.96%													o	o																				
32	SCR	Real Estate Investment and Services	2	-0.54%													o	o																				
33	PVI	Investment Banking and Brokerage Services	1	-0.03%																																		
34	MSN	Food Producers	3	-3.73%																			o	o	o													
35	TCH	Real Estate Investment and Services	2	6.27%																			o	o														
36	NVL	Real Estate Investment and Services	3	2.27%																			o	o	o													
37	VJC	Travel and Leisure	4	-0.01%																																		
38	AAA	Chemicals	2	-0.37%																																		
39	DCM	Chemicals	2	0.01%																																		
40	PVT	Industrial Transportation	5	0.12%																																		
41	SAB	Beverages	4	-0.46%																																		
42	ACV	Industrial Transportation	2	-1.31%																																		

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### 4.3.3 Criteria Value Table

No.	Stock	Sector	Count over 30 periods	Total Excess Return Contribution	OCF3YA			OCF12QG			ROE			DebtPay		
					min	median	max	min	median	max	min	median	max	min	median	max
1	GAS	Gas, Water and Multi-utilities	15	6.26%	9.27T	11.96T	12.59T	0.47	0.62	2.44	0.20	0.26	0.26	-4.89T	-2.82T	93.52B
2	PDR	Real Estate Investment and Services	15	-1.16%	576.45B	748.44B	853.05B	0.51	3.07	20.60	0.20	0.20	0.23	-3.26T	819.57B	2.17T
3	VCS	Construction and Materials	11	2.96%	213.26B	574.48B	637.91B	0.25	76.34	84.85	0.41	0.43	0.58	-305.04B	-194.24B	192.38B
4	BMP	Chemicals	1	-0.57%	439.56B	439.56B	439.56B	2.27	2.27	2.27	0.20	0.20	0.20	-46.03B	-46.03B	-46.03B
5	CTI	Construction and Materials	3	1.04%	230.56B	230.56B	230.56B	1.28	1.28	1.28	0.10	0.10	0.10	9.58B	9.58B	9.58B
6	CVT	Construction and Materials	1	-0.69%	161.91B	161.91B	161.91B	2.40	2.40	2.40	0.35	0.35	0.35	7.43B	7.43B	7.43B
7	DGW	Retailers	2	-0.21%	59.69B	59.69B	59.69B	7.05	7.05	7.05	0.14	0.14	0.14	59.56B	59.56B	59.56B
8	DHG	Pharmaceuticals and Biotechnology	1	-0.48%	564.00B	564.00B	564.00B	0.66	0.66	0.66	0.20	0.20	0.20	-63.68B	-63.68B	-63.68B
9	FPT	Software and Computer Services	15	3.29%	2.70T	2.87T	3.70T	0.26	2.07	28.82	0.23	0.25	0.29	1.63T	2.23T	3.02T
10	HPG	Industrial Metals and Mining	18	3.94%	6.10T	7.05T	8.13T	0.23	1.75	30.23	0.17	0.21	0.30	6.41T	11.41T	18.12T
11	KSB	Industrial Metals and Mining	11	4.30%	262.64B	577.72B	577.72B	1.81	1.81	3.47	0.26	0.27	0.37	0.00	346.67B	594.82B
12	MPC	Food Producers	4	-0.35%	321.31B	321.31B	387.05B	2.64	2.64	2.64	0.31	0.31	0.31	105.38B	788.83B	788.83B
13	MWG	Retailers	12	5.76%	491.48B	1.91T	3.25T	0.38	6.55	24.86	0.30	0.35	0.44	1.50T	2.94T	7.10T
14	VGC	Construction and Materials	5	3.27%	1.08T	1.08T	1.08T	0.64	0.64	0.64	0.09	0.09	0.10	-50.94B	-50.94B	39.13B
15	VSC	Industrial Transportation	1	0.11%	387.03B	387.03B	387.03B	0.34	0.34	0.34	0.19	0.19	0.19	-194.19B	-194.19B	-194.19B
16	CTD	Construction and Materials	2	-4.00%	568.93B	568.93B	568.93B	0.43	0.43	0.43	0.22	0.22	0.22	0.00	0.00	0.00
17	PVS	Oil, Gas and Coal	9	2.78%	183.09B	519.20B	1.29T	0.80	7.46	7.65	0.05	0.05	0.06	-231.76B	49.92B	257.30B
18	VNM	Food Producers	15	-1.98%	8.36T	8.99T	9.31T	0.16	0.41	1.88	0.35	0.39	0.41	342.88B	1.42T	3.08T
19	NLG	Real Estate Investment and Services	5	2.43%	812.15B	812.15B	997.09B	6.53	8.60	8.60	0.20	0.21	0.21	413.31B	413.31B	600.27B
20	TCM	Personal Goods	8	-1.22%	204.06B	244.16B	344.49B	0.23	0.41	9.84	0.15	0.18	0.22	-292.30B	-201.71B	-10.28B
21	TNG	Personal Goods	7	-1.85%	16.35B	16.35B	16.35B	1.33	1.33	1.33	0.25	0.26	0.26	94.40B	94.40B	94.40B
22	ANV	Food Producers	6	0.33%	576.98B	576.98B	576.98B	12.92	12.92	12.92	0.37	0.41	0.44	178.08B	178.08B	178.08B
23	REE	Industrial Engineering	8	-0.25%	343.70B	467.22B	587.67B	0.73	2.39	4.76	0.15	0.16	0.20	-4.54T	-2.87T	199.08B
24	NDN	Real Estate Investment and Services	3	0.90%	293.52B	293.52B	293.52B	68.03	68.03	68.03	0.13	0.13	0.16	-9.72B	-9.72B	-9.72B
25	KBC	Real Estate Investment and Services	12	3.91%	372.20B	465.47B	576.51B	0.24	0.52	10.53	0.06	0.09	0.10	-581.57B	-447.53B	-82.68B
26	PNJ	Personal Goods	3	0.70%	49.74B	49.74B	49.74B	40.44	40.44	40.44	0.29	0.29	0.29	332.80B	332.80B	332.80B
27	PTB	Construction and Materials	3	-1.06%	142.14B	315.86B	315.86B	5.59	5.59	117.09	0.24	0.24	0.28	99.75B	99.75B	389.29B
28	VHC	Food Producers	5	2.92%	840.87B	999.50B	999.50B	1.67	1.89	1.89	0.22	0.22	0.46	-378.94B	-378.94B	-58.56B
29	VIC	Real Estate Investment and Services	3	0.03%	5.97T	5.97T	5.97T	7.91	7.91	7.91	0.08	0.08	0.08	43.44T	43.44T	43.44T
30	CEO	Real Estate Investment and Services	1	-0.18%	789.35B	789.35B	789.35B	20.30	20.30	20.30	0.17	0.17	0.17	315.65B	315.65B	315.65B
31	D2D	Real Estate Investment and Services	4	-1.96%	306.31B	345.88B	385.45B	12.97	19.26	25.55	0.23	0.42	0.61	0.00	0.00	0.00
32	SCR	Real Estate Investment and Services	2	-0.54%	31.17B	31.17B	31.17B	0.40	0.40	0.40	0.07	0.07	0.07	336.95B	336.95B	336.95B
33	PVI	Investment Banking and Brokerage Services	1	-0.03%	843.67B	843.67B	843.67B	2.28	2.28	2.28	0.09	0.09	0.09	0.00	0.00	0.00
34	MSN	Food Producers	3	-3.73%	3.36T	3.36T	3.36T	3.76	3.76	3.76	0.15	0.15	0.15	-11.06T	-11.06T	-11.06T
35	TCH	Real Estate Investment and Services	2	6.27%	752.62B	752.62B	752.62B	0.90	0.90	0.90	0.06	0.06	0.06	637.21B	637.21B	637.21B
36	NVL	Real Estate Investment and Services	3	2.27%	1.84T	1.84T	1.84T	1.81	1.81	1.81	0.14	0.14	0.14	4.23T	4.23T	4.23T
37	VJC	Travel and Leisure	4	-0.01%	2.20T	2.66T	2.66T	1.71	3.13	3.13	0.26	0.26	0.39	1.03T	6.29T	6.29T
38	AAA	Chemicals	2	-0.37%	149.07B	149.07B	149.07B	162.61	162.61	162.61	0.16	0.16	0.16	114.64B	114.64B	114.64B
39	DCM	Chemicals	2	0.01%	1.72T	1.72T	1.72T	4.68	4.68	4.68	0.07	0.07	0.07	-916.70B	-916.70B	-916.70B
40	PVT	Industrial Transportation	5	0.12%	951.51B	1.02T	1.02T	1.27	3.09	3.09	0.13	0.13	0.15	-231.08B	-231.08B	487.98B
41	SAB	Beverages	4	-0.46%	4.79T	4.83T	4.86T	0.99	1.04	1.09	0.23	0.27	0.30	-110.51B	-53.85B	2.81B
42	ACV	Industrial Transportation	2	-1.31%	7.13T	7.40T	7.67T	0.59	1.52	2.46	0.22	0.23	0.24	-199.56B	-177.28B	-154.99B
43	DRH	Real Estate Investment and Services	1	0.09%	181.13B	181.13B	181.13B	29.58	29.58	29.58	0.07	0.07	0.07	-263.95B	-263.95B	-263.95B
44	ASM	Real Estate Investment and Services	4	2.95%	332.45M	106.55B	106.55B	2.33	2.33	153.48	0.11	0.11	0.11	2.29T	2.29T	3.00T
45	GEX	Technology Hardware and Equipment	3	5.39%	416.89B	416.89B	416.89B	0.74	0.74	0.74	0.09	0.09	0.09	2.17T	2.17T	2.17T
46	OGC	Real Estate Investment and Services	1	2.46%	171.55B	171.55B	171.55B	1.79	1.79	1.79	0.28	0.28	0.28	-219.70B	-219.70B	-219.70B

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No.	Stock	Sector	Count over 30 periods	Total Excess Return Contribution	OCF3YA			OCF12QG			ROE			DebtPay		
					min	median	max	min	median	max	min	median	max	min	median	max
47	DGC	Chemicals	3	0.62%	658.04B	658.04B	658.04B	0.33	0.33	0.33	0.21	0.21	0.21	303.96B	303.96B	303.96B
48	DPG	Construction and Materials	2	-0.55%	289.13B	289.13B	289.13B	10.16	10.16	10.16	0.23	0.23	0.23	67.90B	67.90B	67.90B
49	DPM	Chemicals	3	-0.47%	955.69B	955.69B	955.69B	0.91	0.91	0.91	0.09	0.09	0.09	-104.50B	-104.50B	-104.50B
50	FMC	Food Producers	2	-1.38%	165.76B	165.76B	165.76B	0.17	0.17	0.17	0.27	0.27	0.27	132.61B	132.61B	132.61B
51	HDG	Real Estate Investment and Services	3	2.41%	1.02T	1.02T	1.02T	24.05	24.05	24.05	0.41	0.41	0.41	660.22B	660.22B	660.22B
52	HT1	Construction and Materials	2	-0.36%	1.28T	1.28T	1.28T	1.75	1.75	1.75	0.13	0.13	0.13	-856.88B	-856.88B	-856.88B
53	GIL	Personal Goods	2	1.54%	207.74B	207.74B	207.74B	3.30	3.30	3.30	0.24	0.24	0.24	78.77B	78.77B	78.77B
54	GEG	Electricity	1	1.05%	117.28B	117.28B	117.28B	1.11	1.11	1.11	0.11	0.11	0.11	656.86B	656.86B	656.86B
55	IJC	Real Estate Investment and Services	1	4.03%	480.40B	480.40B	480.40B	0.32	0.32	0.32	0.14	0.14	0.14	-810.39B	-810.39B	-810.39B

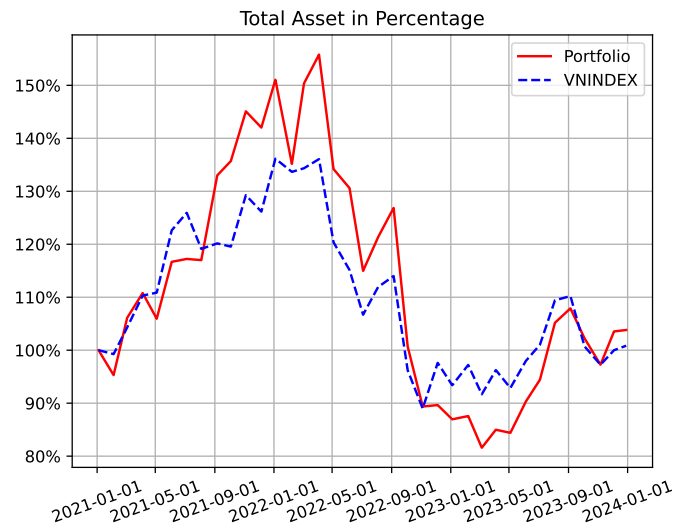
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## 5 Evaluate refined filter on out-of-sample period

### 5.1 Performance Measurement



- Total Excess Return: 2.97%
- Total Absolute Return: Portfolio: 3.81%, VNINDEX: 0.84%
- Expected Annual Excess Return: 0.98%
- Maximum Drawdown: Portfolio: -47.63%, VNINDEX: -34.64%
- Sharpe Ratio: Portfolio: 0.0714, VNINDEX: -0.0254
- Sortino Ratio (MAR=7%): Portfolio: -0.0999, VNINDEX: -0.2783
- Information Ratio: 0.1577
- Average Periodically Number of Stocks: 22.86
- Periodically Excess Returns: Min: -9.37%, Max: 12.80%, Mean: 0.21%, Standard deviation: 4.52%

## 5.2 Restructuring Table

No.	Stock	Sector	Count over 36 periods	Total Excess Return Contribution	2021-01-04	2021-02-04	2021-03-04	2021-04-05	2021-05-04	2021-06-04	2021-07-05	2021-08-04	2021-09-06	2021-10-04	2021-11-04	2021-12-06	2022-01-04	2022-02-07	2022-03-04	2022-04-04	2022-05-04	2022-06-06	2022-07-04	2022-08-04	2022-09-05	2022-10-04	2022-11-04	2022-12-05	2023-01-04	2023-02-06	2023-03-06	2023-04-04	2023-05-04	2023-06-05	2023-07-04	2023-08-04	2023-09-05	2023-10-04	2023-11-06	2023-12-04							
					-3.96%	6.27%	-1.36%	-4.87%	-0.48%	-2.23%	5.22%	12.80%	2.54%	-1.20%	0.28%	-1.56%	-8.69%	10.73%	2.33%	-2.33%	1.67%	-4.63%	2.69%	-5.02%	-3.74%	1.32%	-3.39%	-1.13%	-0.83%	2.81%	1.53%	1.43%	3.09%	1.85%	3.37%	-1.42%	3.63%	-0.59%									
1	ANV	Food Producers	1	-0.93%	o																																										
2	BFC	Chemicals	4	-1.50%	o																																										
3	D2D	Real Estate Investment and Services	4	-1.39%	o	o	o																																								
4	DBC	Food Producers	9	0.22%	o	o	o	o																																							
5	DCM	Chemicals	15	-0.24%	o	o	o																																								
6	DPG	Construction and Materials	19	6.17%	o																																										
7	DRH	Real Estate Investment and Services	5	2.52%	o	o	o																																								
8	FPT	Software and Computer Services	18	1.50%	o	o	o																																								
9	G36	Construction and Materials	5	-2.38%	o	o	o	o																																							
10	GEG	Electricity	12	-0.30%	o	o	o	o																																							
11	HPG	Industrial Metals and Mining	18	-0.87%	o	o	o																																								
12	KSB	Industrial Metals and Mining	3	-0.46%	o	o	o																																								
13	NVL	Real Estate Investment and Services	15	-1.07%	o	o	o	o	o	o	o	o	o																																		
14	PET	Retailers	6	5.13%	o	o	o																																								
15	PHR	Chemicals	6	-1.02%	o	o	o																																								
16	PLC	Chemicals	6	0.20%	o																																										
17	TCM	Personal Goods	9	4.10%	o	o	o																																								
18	TDC	Real Estate Investment and Services	12	-0.52%	o	o	o	o	o																																						
19	VCS	Construction and Materials	14	0.64%	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o			
20	VNM	Food Producers	15	-3.51%	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o		
21	VRE	Real Estate Investment and Services	15	-2.82%	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o		
22	IDJ	Real Estate Investment and Services	1	0.35%	o																																										
23	NT2	Electricity	5	0.80%	o																																										
24	VGT	Personal Goods	8	-0.81%	o	o	o	o	o																																						
25	QNS	Food Producers	10	-0.81%	o																																										
26	QTP	Electricity	3	-0.32%	o																																										
27	S99	Construction and Materials	5	-4.91%	o	o	o	o	o																																						
28	AMV	Medical Equipment and Services	2	-1.20%	o																																										
29	DGW	Retailers	9	0.49%	o	o	o																																								
30	DHC	Industrial Materials	11	-0.36%	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o		
31	HAH	Industrial Transportation	27	1.27%	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	
32	HDG	Real Estate Investment and Services	6	0.21%	o	o	o																																								
33	HHS	Automobiles and Parts	3	-1.28%	o	o	o																																								
34	HT1	Construction and Materials	5	-1.04%	o	o	o																																								
35	IJC	Real Estate Investment and Services	6	0.61%	o	o	o																																								
36	NHH	Chemicals	13	-6.36%	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	
37	PAN	Food Producers	2	-0.81%	o	o																																									
38	PNJ	Personal Goods	9	-1.50%	o	o	o																																								
39	POW	Electricity	12	-2.38%	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o		
40	PVT	Industrial Transportation	18	1.01%	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	
41	TIG	Real Estate Investment and Services	6	1.65%	o	o	o																																								
42	SHI	Household Goods and Home Construction	2	-0.08%	o	o																																									

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No.	Stock	Sector	Count over 36 periods	Total Excess Return Contribution	2021-01-04	2021-02-04	2021-03-04	2021-04-05	2021-05-04	2021-06-04	2021-07-05	2021-08-04	2021-09-06	2021-10-04	2021-11-04	2021-12-06	2022-01-04	2022-02-07	2022-03-04	2022-04-04	2022-05-04	2022-06-06	2022-07-04	2022-08-04	2022-09-05	2022-10-04	2022-11-04	2022-12-05	2023-01-04	2023-02-06	2023-03-04	2023-04-04	2023-05-04	2023-06-05	2023-07-04	2023-08-04	2023-09-05	2023-10-04	2023-11-06	2023-12-04						
					-3.96%	6.27%	-1.36%	-4.87%	-0.48%	-2.23%	5.22%	12.80%	2.54%	-1.20%	0.28%	-1.56%	-8.69%	10.73%	2.33%	-2.33%	1.67%	-4.63%	0.63%	2.69%	-5.02%	-3.74%	-9.37%	1.32%	-3.39%	-1.13%	-0.83%	2.81%	1.53%	1.43%	3.09%	1.85%	3.37%	-1.42%	3.63%	-0.59%						
43	BWE	Gas, Water and Multi-utilities	2	0.08%																																										
44	VHM	Real Estate Investment and Services	1	0.51%																																										
45	ASM	Real Estate Investment and Services	12	1.26%																																										
46	DGC	Chemicals	24	6.32%																																										
47	GEX	Technology Hardware and Equipment	9	1.37%																																										
48	GMD	Industrial Transportation	24	3.26%																																										
49	REE	Industrial Engineering	11	3.34%																																										
50	SMC	Industrial Metals and Mining	3	2.48%																																										
51	TCH	Real Estate Investment and Services	3	-0.03%																																										
52	MHC	Industrial Transportation	2	2.52%																																										
53	PC1	Construction and Materials	5	4.03%																																										
54	DRI	Chemicals	4	-0.54%																																										
55	GTN	General Industrials	1	-0.05%																																										
56	TIP	Real Estate Investment and Services	1	-0.90%																																										
57	VGS	Industrial Metals and Mining	4	-1.38%																																										
58	AAA	Chemicals	3	0.76%																																										
59	BII	Real Estate Investment and Services	3	-0.72%																																										
60	DDV	Chemicals	6	0.29%																																										
61	DPR	Chemicals	7	-0.59%																																										
62	FLC	Real Estate Investment and Services	3	1.64%																																										
63	FMC	Food Producers	3	0.32%																																										
64	IPA	Investment Banking and Brokerage Services	3	2.52%																																										
65	KDC	Food Producers	15	1.00%																																										
66	LAS	Chemicals	7	-3.02%																																										
67	MWG	Retailers	6	-0.04%																																										
68	NBC	Oil, Gas and Coal	2	-1.96%																																										
69	PVP	Industrial Transportation	2	-0.58%																																										
70	SAB	Beverages	12	-0.24%																																										
71	SBT	Food Producers	8	0.04%																																										
72	TVN	Industrial Metals and Mining	3	-0.59%																																										
73	VGC	Construction and Materials	15	4.52%																																										
74	VTO	Industrial Transportation	2	-0.84%																																										
75	CLX	Personal Care, Drug and Grocery Stores	2	-0.57%																																										
76	FIR	Real Estate Investment and Services	3	0.79%																																										
77	HID	Construction and Materials	2	1.21%																																										
78	HMC	Industrial Metals and Mining	1	-0.58%																																										
79	ITD	Technology Hardware and Equipment	1	-0.67%																																										
80	SJD	Electricity	1	-0.02%																																										
81	TDM	Gas, Water and Multi-utilities	2	-0.06%																																										
82	DBD	Pharmaceuticals and Biotechnology	1	-0.59%																																										
83	DCL	Pharmaceuticals and Biotechnology	1	-0.26%																																										
84	KHP	Electricity	1	0.81%																																										
85	VC2	Construction and Materials	2	0.82%																																										
86	FIT	Real Estate Investment and Services	6	-2.59%																																										
87	GAS	Gas, Water and Multi-utilities	12	-0.11%																																										

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### 5.3 Criteria Value Table

No.	Stock	Sector	Count over 36 periods	Total Excess Return Contribution	OCF3YA			OCF12QG			ROE			DebtPay		
					min	median	max	min	median	max	min	median	max	min	median	max
1	ANV	Food Producers	1	-0.93%	598.19B	598.19B	598.19B	0.24	0.24	0.24	0.14	0.14	0.14	61.32B	61.32B	61.32B
2	BFC	Chemicals	4	-1.50%	268.67B	268.67B	468.35B	0.47	1.50	1.50	0.14	0.23	0.23	-450.34B	269.89B	269.89B
3	D2D	Real Estate Investment and Services	4	-1.39%	199.27B	215.54B	215.54B	0.45	0.45	3.17	0.29	0.40	0.40	0.00	0.00	0.00
4	DBC	Food Producers	9	0.22%	802.13B	1.03T	1.05T	3.24	3.56	3.97	0.22	0.29	0.42	-1.51T	-1.07T	-721.42B
5	DCM	Chemicals	15	-0.24%	1.47T	2.83T	3.80T	0.36	0.76	6.62	0.09	0.26	0.52	-1.21T	-165.71B	53.32B
6	DPG	Construction and Materials	19	6.17%	230.30B	387.53B	562.98B	0.42	10.16	19.64	0.18	0.26	0.32	-268.85B	-59.53B	302.77B
7	DRH	Real Estate Investment and Services	5	2.52%	59.71B	140.77B	140.77B	1.05	1.05	4.95	0.06	0.08	0.08	-214.90B	-214.90B	276.75B
8	FPT	Software and Computer Services	18	1.50%	4.04T	4.96T	5.73T	0.24	0.86	2.43	0.24	0.27	0.29	-2.35T	3.64T	6.88T
9	G36	Construction and Materials	5	-2.38%	285.51B	285.51B	411.16B	0.21	0.21	6.27	0.05	0.08	0.08	-92.29B	-92.29B	101.04B
10	GEG	Electricity	12	-0.30%	76.30B	915.02B	1.35T	0.76	5.52	28.90	0.06	0.09	0.11	-90.42B	2.51T	3.29T
11	HPG	Industrial Metals and Mining	18	-0.87%	8.53T	14.96T	17.43T	1.03	4.04	6.61	0.09	0.37	0.46	479.39B	5.82T	13.73T
12	KSB	Industrial Metals and Mining	3	-0.46%	577.72B	577.72B	577.72B	1.81	1.81	1.81	0.27	0.27	0.27	346.67B	346.67B	346.67B
13	NVL	Real Estate Investment and Services	15	-1.07%	55.41B	1.14T	3.06T	0.60	2.16	9.14	0.08	0.14	0.21	9.00T	12.87T	14.24T
14	PET	Retailers	6	5.13%	106.34B	108.85B	111.35B	4.45	4.75	5.05	0.08	0.10	0.11	-270.96B	245.78B	762.53B
15	PHR	Chemicals	6	-1.02%	492.26B	536.67B	581.08B	0.47	3.96	7.46	0.17	0.18	0.19	-106.66B	-74.26B	-41.87B
16	PLC	Chemicals	6	0.20%	144.49B	220.25B	475.59B	0.20	0.26	0.75	0.09	0.10	0.13	-315.15B	220.97B	345.17B
17	TCM	Personal Goods	9	4.10%	183.00B	202.43B	356.61B	0.45	0.46	0.64	0.14	0.15	0.18	-267.50B	-67.93B	115.09B
18	TDC	Real Estate Investment and Services	12	-0.52%	370.08B	473.74B	536.90B	0.36	0.79	1.49	0.13	0.17	0.17	-960.07B	114.18B	602.09B
19	VCS	Construction and Materials	14	0.64%	637.91B	819.02B	1.08T	0.25	2.41	2.93	0.39	0.40	0.45	-116.92B	-96.89B	62.94B
20	VNM	Food Producers	15	-3.51%	9.72T	10.02T	10.78T	0.28	0.54	2.58	0.26	0.33	0.38	307.80B	2.32T	3.27T
21	VRE	Real Estate Investment and Services	15	-2.82%	3.59T	3.64T	3.72T	0.26	0.73	5.56	0.08	0.09	0.11	0.00	0.00	2.92T
22	IDJ	Real Estate Investment and Services	1	0.35%	11.23B	11.23B	11.23B	27.96	27.96	27.96	0.23	0.23	0.23	175.08B	175.08B	175.08B
23	NT2	Electricity	5	0.80%	1.26T	1.26T	1.61T	0.24	1.89	1.89	0.13	0.21	0.21	-2.11T	-2.11T	-1.09T
24	VGT	Personal Goods	8	-0.81%	905.50B	1.03T	1.27T	0.28	2.16	3.01	0.07	0.08	0.15	-1.38T	-1.11T	-9.76B
25	QNS	Food Producers	10	-0.81%	1.44T	1.64T	1.64T	0.19	0.71	0.78	0.18	0.19	0.24	-185.90B	262.48B	463.16B
26	QTP	Electricity	3	-0.32%	2.66T	2.66T	2.80T	0.22	0.22	2.81	0.08	0.32	0.32	-1.95T	-1.83T	-1.83T
27	S99	Construction and Materials	5	-4.91%	35.47B	149.33B	149.33B	1.68	2.10	28.96	0.12	0.29	0.29	266.90B	338.38B	421.34B
28	AMV	Medical Equipment and Services	2	-1.20%	76.27B	76.27B	76.27B	2.10	2.10	2.10	0.11	0.11	0.11	4.36B	4.36B	4.36B
29	DGW	Retailers	9	0.49%	85.69B	329.16B	420.78B	4.78	8.97	22.70	0.26	0.34	0.45	9.35B	487.63B	593.32B
30	DHC	Industrial Materials	11	-0.36%	207.24B	207.24B	365.24B	0.58	46.51	46.51	0.18	0.36	0.38	-263.59B	-263.59B	147.59B
31	HAH	Industrial Transportation	27	1.27%	147.81B	603.81B	851.88B	1.10	3.96	19.56	0.11	0.35	0.53	-97.67B	216.71B	423.75B
32	HDG	Real Estate Investment and Services	6	0.21%	859.90B	942.46B	1.03T	1.91	3.76	5.62	0.24	0.29	0.34	493.28B	649.82B	806.37B
33	HHS	Automobiles and Parts	3	-1.28%	452.35B	452.35B	452.35B	2.18	2.18	2.18	0.08	0.08	0.08	0.00	0.00	0.00
34	HT1	Construction and Materials	5	-1.04%	1.38T	1.38T	1.44T	0.87	0.87	6.48	0.11	0.11	0.11	-812.09B	-731.02B	-731.02B
35	IJC	Real Estate Investment and Services	6	0.61%	382.90B	542.85B	702.80B	5.09	5.32	5.54	0.19	0.23	0.27	341.54B	384.12B	426.71B
36	NHH	Chemicals	13	-6.36%	23.30B	54.73B	114.54B	0.20	1.71	1.80	0.09	0.21	0.24	-55.30B	8.76B	59.45B
37	PAN	Food Producers	2	-0.81%	180.88B	180.88B	180.88B	79.27	79.27	79.27	0.05	0.05	0.05	728.24B	728.24B	728.24B
38	PNJ	Personal Goods	9	-1.50%	98.49B	177.89B	564.44B	0.73	3.69	17.52	0.22	0.26	0.26	-775.33B	-673.23B	-521.64B
39	POW	Electricity	12	-2.38%	5.37T	5.68T	6.08T	0.35	1.45	6.79	0.06	0.08	0.10	-5.80T	-2.94T	444.36B
40	PVT	Industrial Transportation	18	1.01%	1.11T	1.29T	1.51T	0.50	2.19	4.75	0.12	0.13	0.17	-776.51B	485.95B	726.11B
41	TIG	Real Estate Investment and Services	6	1.65%	37.30B	63.51B	173.49B	4.01	5.34	5.42	0.07	0.07	0.10	-454.80B	-226.30B	-12.74B
42	SHI	Household Goods and Home Construction	2	-0.08%	47.43B	47.43B	47.43B	10.30	10.30	10.30	0.07	0.07	0.07	28.62B	28.62B	28.62B
43	BWE	Gas, Water and Multi-utilities	2	0.08%	1.02T	1.34T	1.66T	0.18	0.59	1.00	0.18	0.19	0.20	-142.41B	200.65B	543.71B
44	VHM	Real Estate Investment and Services	1	0.51%	25.12T	25.12T	25.12T	9.49	9.49	9.49	0.37	0.37	0.37	-1.08T	-1.08T	-1.08T
45	ASM	Real Estate Investment and Services	12	1.26%	356.76B	571.97B	664.79B	0.15	7.02	30.36	0.08	0.09	0.15	-423.19B	215.45B	691.25B
46	DGC	Chemicals	24	6.32%	954.34B	2.11T	3.52T	0.18	5.35	7.16	0.26	0.55	0.78	-385.76B	-207.39B	184.54B

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No.	Stock	Sector	Count over 36 periods	Total Excess Return Contribution	OCF3YA			OCF12QG			ROE			DebtPay		
					min	median	max	min	median	max	min	median	max	min	median	max
47	GEX	Technology Hardware and Equipment	9	1.37%	78.95B	1.45T	3.16T	4.78	6.57	6.98	0.05	0.09	0.14	-3.16T	-1.56T	4.73T
48	GMD	Industrial Transportation	24	3.26%	755.77B	906.03B	1.52T	0.47	1.11	9.78	0.07	0.11	0.28	-168.54B	61.64B	203.16B
49	REE	Industrial Engineering	11	3.34%	470.14B	978.03B	1.53T	1.20	6.15	8.26	0.14	0.16	0.19	-1.19T	704.02B	1.11T
50	SMC	Industrial Metals and Mining	3	2.48%	296.65B	296.65B	296.65B	3.36K	3.36K	3.36K	0.33	0.33	0.33	416.03B	416.03B	416.03B
51	TCH	Real Estate Investment and Services	3	-0.03%	235.86B	235.86B	235.86B	0.22	0.22	0.22	0.15	0.15	0.15	-478.38B	-478.38B	-478.38B
52	MHC	Industrial Transportation	2	2.52%	50.18B	50.18B	50.18B	1.37	1.37	1.37	0.45	0.45	0.45	206.64B	206.64B	206.64B
53	PC1	Construction and Materials	5	4.03%	299.91B	299.91B	581.52B	1.23	1.23	2.73	0.12	0.14	0.14	1.18T	4.08T	4.08T
54	DRI	Chemicals	4	-0.54%	106.57B	111.12B	140.47B	0.55	0.88	2.64	0.06	0.12	0.12	-101.66B	-96.28B	-92.65B
55	GTN	General Industrials	1	-0.05%	196.41B	196.41B	196.41B	0.26	0.26	0.26	0.06	0.06	0.06	0.00	0.00	0.00
56	TIP	Real Estate Investment and Services	1	-0.90%	136.56B	136.56B	136.56B	1.30	1.30	1.30	0.28	0.28	0.28	-97.02B	-97.02B	-97.02B
57	VGS	Industrial Metals and Mining	4	-1.38%	25.63B	88.07B	88.07B	0.51	0.51	4.80	0.16	0.21	0.21	49.49B	66.42B	66.42B
58	AAA	Chemicals	3	0.76%	425.37B	425.37B	425.37B	0.32	0.32	0.32	0.08	0.08	0.08	-550.88B	-550.88B	-550.88B
59	BII	Real Estate Investment and Services	3	-0.72%	20.90B	20.90B	20.90B	159.35	159.35	159.35	0.27	0.27	0.27	181.39B	181.39B	181.39B
60	DDV	Chemicals	6	0.29%	143.83B	185.73B	227.63B	1.13	1.80	2.47	0.12	0.15	0.18	-390.32B	-290.98B	-191.64B
61	DPR	Chemicals	7	-0.59%	304.92B	327.44B	343.48B	0.62	0.69	0.71	0.10	0.10	0.18	-164.83B	-65.87B	-47.31B
62	FLC	Real Estate Investment and Services	3	1.64%	522.99B	522.99B	522.99B	0.24	0.24	0.24	0.31	0.31	0.31	1.97T	1.97T	1.97T
63	FMC	Food Producers	3	0.32%	117.38B	259.03B	259.03B	0.72	0.72	1.49	0.19	0.19	0.20	-29.18B	-29.18B	108.74B
64	IPA	Investment Banking and Brokerage Services	3	2.52%	77.07B	77.07B	77.07B	9.52	9.52	9.52	0.56	0.56	0.56	1.14T	1.14T	1.14T
65	KDC	Food Producers	15	1.00%	83.21B	239.68B	511.07B	0.22	0.58	91.99	0.07	0.08	0.09	-321.27B	1.25T	1.96T
66	LAS	Chemicals	7	-3.02%	309.05B	316.67B	316.67B	0.77	6.17	6.17	0.05	0.06	0.06	-890.01B	-890.01B	402.84B
67	MWG	Retailers	6	-0.04%	3.99T	5.15T	6.31T	0.36	0.46	0.55	0.19	0.23	0.27	-8.06T	657.21B	9.38T
68	NBC	Oil, Gas and Coal	2	-1.96%	249.39B	249.39B	249.39B	0.88	0.88	0.88	0.57	0.57	0.57	93.44B	93.44B	93.44B
69	PVP	Industrial Transportation	2	-0.58%	312.32B	312.32B	312.32B	0.37	0.37	0.37	0.21	0.21	0.21	-10.18B	-10.18B	-10.18B
70	SAB	Beverages	12	-0.24%	3.80T	4.36T	4.61T	0.22	1.08	3.96	0.18	0.21	0.24	-317.72B	-120.03B	80.28B
71	SBT	Food Producers	8	0.04%	557.13B	622.41B	804.40B	0.70	3.55	20.70	0.05	0.06	0.08	526.60B	618.98B	1.22T
72	TVN	Industrial Metals and Mining	3	-0.59%	677.60B	677.60B	677.60B	0.83	0.83	0.83	0.13	0.13	0.13	1.40T	1.40T	1.40T
73	VGC	Construction and Materials	15	4.52%	2.92T	3.48T	4.04T	0.31	1.29	10.27	0.13	0.17	0.22	-51.71B	129.14B	931.30B
74	VTO	Industrial Transportation	2	-0.84%	316.41B	316.41B	316.41B	0.37	0.37	0.37	0.09	0.09	0.09	-88.63B	-88.63B	-88.63B
75	CLX	Personal Care, Drug and Grocery Stores	2	-0.57%	27.31B	37.93B	48.55B	0.22	0.60	0.99	0.13	0.13	0.13	-4.24B	18.77B	41.79B
76	FIR	Real Estate Investment and Services	3	0.79%	28.81B	28.81B	52.39B	5.41	964.34	964.34	0.08	0.10	0.10	45.35B	45.35B	64.22B
77	HID	Construction and Materials	2	1.21%	19.86B	19.86B	19.86B	48.92	48.92	48.92	0.17	0.17	0.17	40.86B	40.86B	40.86B
78	HMC	Industrial Metals and Mining	1	-0.58%	112.85B	112.85B	112.85B	1.86	1.86	1.86	0.36	0.36	0.36	23.92B	23.92B	23.92B
79	ITD	Technology Hardware and Equipment	1	-0.67%	1.35B	1.35B	1.35B	1.45	1.45	1.45	0.16	0.16	0.16	20.48B	20.48B	20.48B
80	SJD	Electricity	1	-0.02%	129.11B	129.11B	129.11B	0.41	0.41	0.41	0.12	0.12	0.12	-5.30B	-5.30B	-5.30B
81	TDM	Gas, Water and Multi-utilities	2	-0.06%	265.28B	265.28B	265.28B	1.87	1.87	1.87	0.15	0.15	0.15	-153.19B	-153.19B	-153.19B
82	DBD	Pharmaceuticals and Biotechnology	1	-0.59%	106.58B	106.58B	106.58B	11.02	11.02	11.02	0.17	0.17	0.17	-159.70B	-159.70B	-159.70B
83	DCL	Pharmaceuticals and Biotechnology	1	-0.26%	19.52B	19.52B	19.52B	8.52	8.52	8.52	0.09	0.09	0.09	55.37B	55.37B	55.37B
84	KHP	Electricity	1	0.81%	162.21B	162.21B	162.21B	0.35	0.35	0.35	0.22	0.22	0.22	13.18B	13.18B	13.18B
85	VC2	Construction and Materials	2	0.82%	2.84B	57.89B	112.93B	3.54	4.63	5.71	0.08	0.10	0.12	-58.86B	104.78B	268.43B
86	FIT	Real Estate Investment and Services	6	-2.59%	26.49B	45.33B	64.18B	10.50	10.60	10.69	0.05	0.05	0.05	-307.44B	-217.60B	-127.75B
87	GAS	Gas, Water and Multi-utilities	12	-0.11%	8.95T	9.22T	9.55T	0.26	0.80	7.25	0.17	0.22	0.25	-1.61T	1.76T	5.31T
88	MSN	Food Producers	9	0.16%	2.15T	2.53T	3.90T	0.68	0.79	1.34	0.12	0.30	0.34	2.97T	6.74T	7.24T
89	NTP	Chemicals	2	-0.20%	605.65B	697.12B	788.60B	0.60	0.94	1.28	0.17	0.17	0.18	664.47B	679.77B	695.08B
90	SZC	Real Estate Investment and Services	14	-1.73%	543.62B	628.88B	628.88B	0.57	0.57	4.83	0.16	0.21	0.24	545.87B	545.87B	690.04B
91	CSV	Chemicals	6	1.96%	84.59B	234.57B	247.77B	0.30	0.74	19.53	0.16	0.24	0.27	-29.00B	32.75B	57.03B
92	TVD	Oil, Gas and Coal	1	-0.45%	564.87B	564.87B	564.87B	0.38	0.38	0.38	0.12	0.12	0.12	-164.68B	-164.68B	-164.68B
93	VSC	Industrial Transportation	9	0.29%	528.37B	542.16B	565.65B	0.25	0.69	1.28	0.08	0.16	0.17	-76.01B	0.00	908.40B
94	BSR	Oil, Gas and Coal	12	2.06%	4.78T	6.97T	8.70T	0.72	1.99	3.49	0.19	0.32	0.37	-8.21T	-2.29T	-1.92T
95	CTR	Construction and Materials	5	-0.23%	274.68B	477.37B	477.37B	0.35	0.35	2.66	0.30	0.32	0.32	132.82B	132.82B	1.29T

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No.	Stock	Sector	Count over 36 periods	Total Excess Return Contribution	OCF3YA			OCF12QG			ROE			DebtPay		
					min	median	max	min	median	max	min	median	max	min	median	max
96	DPM	Chemicals	15	-0.56%	1.69T	2.75T	2.92T	0.77	4.39	154.56	0.33	0.50	0.56	-229.62B	-144.87B	-106.17B
97	ELC	Software and Computer Services	3	-1.17%	69.68B	69.68B	69.68B	1.75	1.75	1.75	0.06	0.06	0.06	-37.64B	-37.64B	-37.64B
98	GVR	Chemicals	3	-0.95%	2.27T	2.27T	2.27T	9.35	9.35	9.35	0.10	0.10	0.10	-3.10T	-3.10T	-3.10T
99	HAX	Automobiles and Parts	4	-1.45%	172.85B	225.66B	278.46B	0.21	1.16	2.10	0.20	0.23	0.26	-304.28B	-38.69B	226.91B
100	HCD	Chemicals	1	-0.10%	10.38B	10.38B	10.38B	1.40	1.40	1.40	0.13	0.13	0.13	54.45B	54.45B	54.45B
101	HDC	Real Estate Investment and Services	6	-1.88%	16.63B	17.38B	18.12B	0.44	1.14	1.84	0.24	0.24	0.25	328.83B	337.87B	346.91B
102	HSG	Industrial Metals and Mining	6	-1.19%	1.60T	2.10T	2.60T	0.16	11.36	22.56	0.36	0.42	0.48	-1.40T	-550.59B	299.75B
103	NTL	Real Estate Investment and Services	1	-0.21%	278.90B	278.90B	278.90B	123.30	123.30	123.30	0.18	0.18	0.18	-123.03B	-123.03B	-123.03B
104	PLX	Oil, Gas and Coal	3	-0.44%	2.96T	2.96T	2.96T	3.81	3.81	3.81	0.12	0.12	0.12	-647.38B	-647.38B	-647.38B
105	SGP	Industrial Transportation	2	-0.70%	223.49B	223.49B	223.49B	1.71	1.71	1.71	0.37	0.37	0.37	155.28B	155.28B	155.28B
106	TCD	Industrial Transportation	2	-1.42%	66.00B	66.00B	66.00B	1.59	1.59	1.59	0.35	0.35	0.35	-169.74B	-169.74B	-169.74B
107	VOS	Industrial Transportation	5	0.39%	476.05B	476.05B	635.65B	0.36	4.00	4.00	0.38	0.65	0.65	-685.93B	-685.93B	-638.16B
108	IDC	Real Estate Investment and Services	15	1.23%	821.36B	952.20B	1.54T	0.41	4.10	63.54	0.16	0.35	0.43	-64.61B	645.16B	752.37B
109	OIL	Oil, Gas and Coal	3	-0.49%	109.93B	109.93B	109.93B	2.44	2.44	2.44	0.08	0.08	0.08	1.72T	1.72T	1.72T
110	VPI	Real Estate Investment and Services	12	0.89%	370.36B	746.17B	864.52B	0.39	1.46	2.47	0.13	0.16	0.21	-443.65B	1.34T	2.12T
111	VGI	Telecommunications Equipment	7	-1.40%	6.97T	7.32T	8.43T	0.57	1.39	11.13	0.05	0.08	0.13	-6.61T	-5.05T	-4.23T
112	BCM	Real Estate Investment and Services	1	-0.30%	2.41T	2.41T	2.41T	40.07	40.07	40.07	0.11	0.11	0.11	-141.17B	-141.17B	-141.17B
113	GIL	Personal Goods	3	-0.94%	313.42B	313.42B	313.42B	2.78	2.78	2.78	0.19	0.19	0.19	403.07B	403.07B	403.07B
114	HUT	Construction and Materials	6	-0.73%	145.06B	170.47B	195.88B	3.35	44.98	86.61	0.06	0.08	0.09	-358.12B	-296.60B	-235.09B
115	NLG	Real Estate Investment and Services	3	0.90%	378.70B	378.70B	378.70B	2.98	2.98	2.98	0.11	0.11	0.11	946.76B	946.76B	946.76B
116	PDR	Real Estate Investment and Services	6	-0.25%	812.91B	904.88B	996.85B	0.28	1.25	2.22	0.11	0.18	0.26	-1.39T	875.53B	3.15T
117	TLG	Personal Care, Drug and Grocery Stores	1	0.36%	293.24B	293.24B	293.24B	0.86	0.86	0.86	0.21	0.21	0.21	8.39B	8.39B	8.39B
118	VHC	Food Producers	9	-0.55%	422.50B	660.49B	775.91B	0.34	1.27	3.28	0.30	0.32	0.33	497.02B	972.24B	1.12T
119	PTB	Construction and Materials	4	0.42%	473.85B	532.20B	574.78B	1.56	5.56	9.56	0.19	0.21	0.25	-421.49B	-352.00B	-184.12B
120	CEO	Real Estate Investment and Services	9	1.65%	77.35B	190.70B	354.97B	2.89	2.90	48.35	0.08	0.08	0.09	-1.10T	-644.41B	-582.71B
121	BMP	Chemicals	7	0.10%	562.34B	737.86B	806.72B	0.96	1.47	1.53	0.28	0.32	0.38	-2.11B	-2.11B	-2.11B
122	LTG	Chemicals	1	0.03%	218.14B	218.14B	218.14B	3.89	3.89	3.89	0.13	0.13	0.13	151.93B	151.93B	151.93B
123	EVE	Household Goods and Home Construction	1	-0.01%	63.66B	63.66B	63.66B	6.72	6.72	6.72	0.09	0.09	0.09	120.50B	120.50B	120.50B
124	ITC	Real Estate Investment and Services	2	-0.90%	141.89B	141.89B	141.89B	6.56	6.56	6.56	0.07	0.08	0.08	-37.73B	-37.73B	-37.73B
125	HHV	Construction and Materials	3	0.50%	402.06B	402.06B	402.06B	0.40	0.40	0.40	0.06	0.06	0.06	-502.51B	-502.51B	-502.51B
126	MSH	Personal Goods	1	0.65%	283.00B	283.00B	283.00B	5.00	5.00	5.00	0.17	0.17	0.17	139.84B	139.84B	139.84B
127	OGC	Real Estate Investment and Services	2	-2.39%	40.46B	40.46B	40.46B	0.17	0.17	0.17	0.08	0.08	0.08	-22.07B	-22.07B	-22.07B
128	VTP	Industrial Transportation	3	1.09%	103.33B	103.33B	103.33B	6.31K	6.31K	6.31K	0.15	0.15	0.15	169.99B	169.99B	169.99B

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