

Identifying the top sector - can it work?

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EXECUTIVE SUMMARY

In a recent article, published by the CFA Institute, Paul Kovarsky and I have covered the importance of sector selection for portfolio returns. We have presented a method based on fundamental momentum that over-weights specific sectors based on the improving fundamentals of the companies in these sectors.

In this article, I have taken this approach to the extreme and am presenting the results of selecting monthly the top sector based on the same fundamental momentum grading system. Similar to a concept car in a car show or a concept dress in a fashion show, we have created a strategy which may seem too risky for a portfolio manager but can help us demonstrate the efficacy of the sector grading model.

We will start by reviewing the sectors' behavior over the last 12+ years (since 2007). Which sectors have beat the benchmark and which have not? How often? Is there a wide dispersion?

Following that, we will show the grading method and how often sectors are graded positively or negatively.

Finally, we will present the combined results when picking the top graded sector monthly and how does that compare to different benchmarks: The S&P 500, other sectors (Tech, Financials, etc.), as well as the bottom graded sector. We will also examine the effect of picking the 2,3 and 4 top sectors compared to only one. The results are quite revealing.

ANALYZING SECTOR BEHAVIORS

We all know that sectors behave differently over time. In a given month there can be a wide spread between the return of one sector over another. Naturally, when you calculate a weighted average of all the sector returns, you get results which are very close to the S&P 500 benchmark.

Over the test period (1/2007-5/2019) which included 149 months, we recorded the following results (*):

The average spread between sector returns	9.61%
The standard deviation of the spread	4.14%
Maximal Spread	25.66% (2009-01-31) Low: Financials. High: Healthcare.
Minimal Spread	2.70% (2011-06-30) Low: Financials. High: Utilities

(*) All the data relates to the S&P® Total Return Sector Indices.

As expected, in each month, some sectors beat the S&P 500 while others lag. The number of sectors that beat the benchmark ranges between 3 and 7 with an average of 5 (note that since Oct 2016 we are looking at 11 sectors as the Real Estate sector was split from the Financials).

Overall, during the test period, some sectors did better than others. Here is the summary table:

Sector	CAGR(*)	STDEV(**)
Communication services	5.01%	16.14%
Consumer discretionary	10.66%	17.94%
Consumer staples	9.30%	11.54%
Energy	2.00%	20.56%
Financials	0.96%	23.51%
Healthcare	10.06%	13.86%
Industrials	7.66%	18.89%
Information technology	12.16%	18.13%
Materials	5.73%	20.45%
Real Estate	6.98%	14.84%
Utilities	7.81%	13.48%

S&P 500 TR	7.74%	14.77%
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(*) CAGR – Compound Annual Growth Rate

(**) STDEV – Monthly standard deviation, annualized

SECTOR GRADING BEHAVIOR

Alpha Vee has created a sector indicator (AVSI – Alpha Vee Sector indicator) which is based on fundamental momentum. Each month, all sectors are graded based on the improvement or degradation of the average grade of many of the large, leading companies in the sector.

The grade is calculated between 0 and 100, according to the amount of change, while 50 represents no change. Above or below a certain change, the grade is set to 100 or 0, so it is possible that several sectors will get the same grade.

When we view the grades of each sector over the 149 months test period, we see a relatively uniform distribution of the grades for each sector.

The table below shows the percentage of times each sector achieved grade 100 and grade 0.

Sector	Grade=100	Grade=0
Communication services	45%	48%
Consumer discretionary	46%	28%
Consumer staples	45%	38%
Energy	21%	26%
Financials	44%	38%
Healthcare	41%	53%
Industrials	33%	44%
Information technology	38%	32%
Materials	47%	46%
Real Estate (*)	44%	44%
Utilities	48%	52%

(*) - Real estate calculated only since 10/2016)

PICKING THE TOP SECTOR - A COMPARATIVE STUDY

We now arrive at the essence of the study. Is the AVSI grade a reliable indicator, even when it is used to pick only one top sector?

Since several sectors may have the same grade, we will always pick between them the one that has the largest weight in the benchmark. This will provide an inherent advantage to large sectors such as Tech and Financials. Still, as can be seen, they are not the ones that are always being picked.

Let's start from the end – when picking the top sector monthly, we were able to beat the S&P 500 handily. Here are the results:

	CAGR	STDEV
S&P 500 TR	7.74%	14.77%
Top 1	16.61%	17.42%

Over the 149 months, the TOP 1 Sector strategy has beaten the S&P 500 61% of the time (91 months).

To validate the results, we ran a similar strategy, this time picking the Bottom 1 Sector (the one with the lowest AVSI grade, and if there is a tie, taking the one with the largest weight).

This strategy yields abysmal results (-3% CAGR and 21% standard deviation). It managed to beat the S&P 500 only 40% of the time.

It should be noted that the TOP 1 strategy is not only better than the S&P 500. It is better than any specific sector strategy over the test period, including Tech (The CAGRs of all the sectors are shown in the second section above).

Here is a summary table of the percentage each sector is being used as part of the 149 months:

Sector	% of months used at Top 1
Communication services	2.0%
Consumer discretionary	6.7%
Consumer staples	6.7%
Energy	4.7%
Financials	30.2%
Healthcare	7.4%
Industrials	4.0%
Information technology	32.9%
Materials	1.3%
Real Estate (*)	0.0%
Utilities	4.0%

The strategy uses Tech as the chosen sector, for example, only 33% of the time, apparently in the right months. Note that the use of the sector's weight, when the grades are equal, gives an advantage to the larger sectors: Tech and Financials.

Here is a chart showing the TOP 1 Sector strategy compared to the S&P 500 and some large sectors:

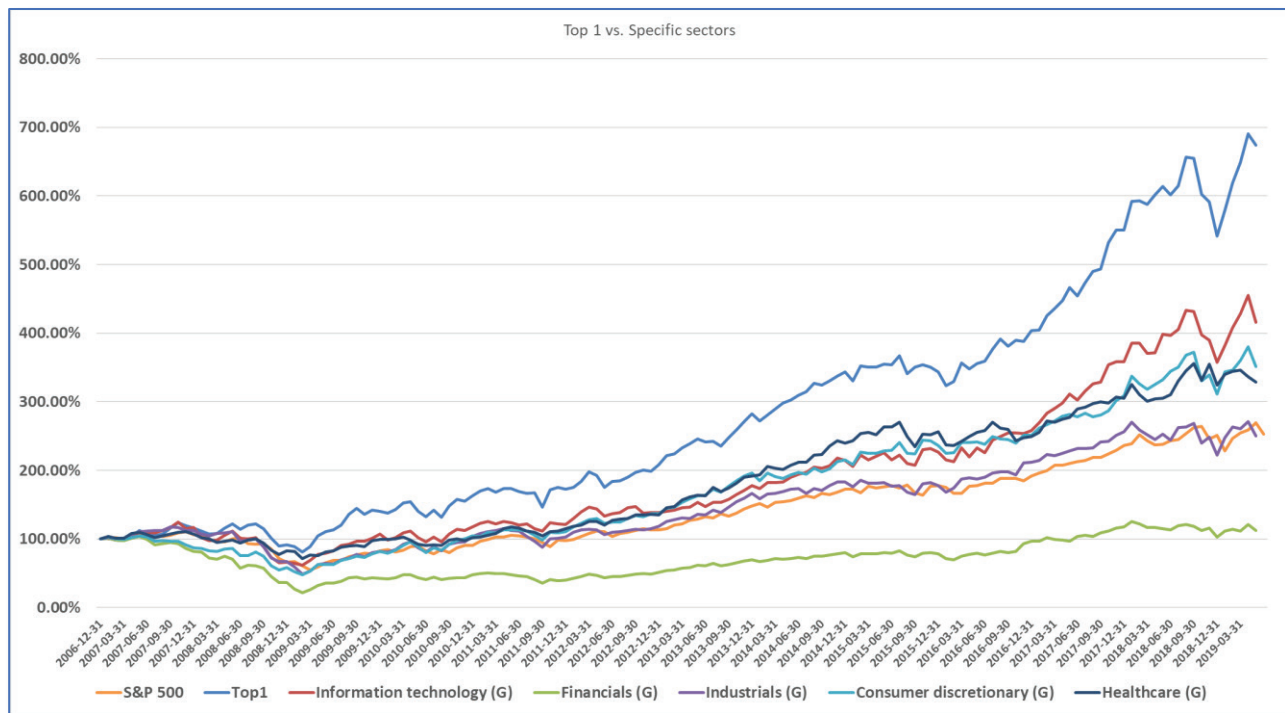


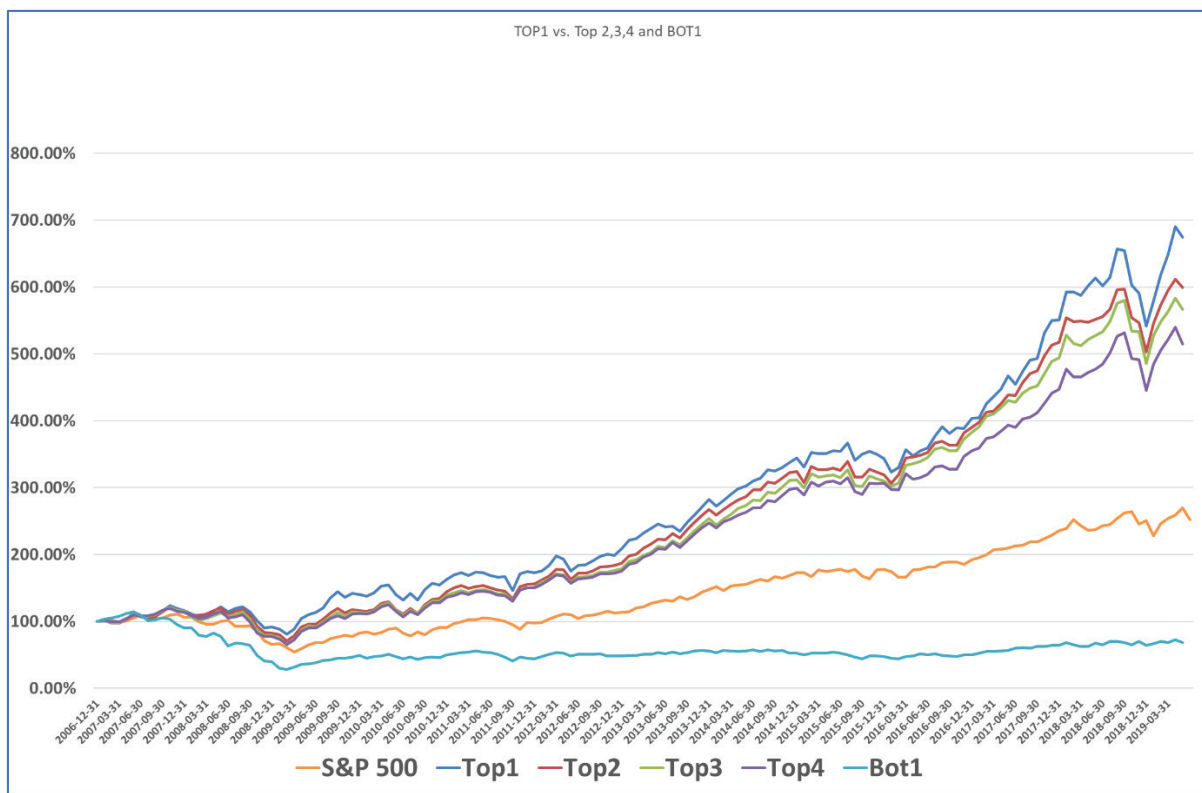
Figure 1
Top 1 Sector Strategy compared with the S&P 500 and some single sector strategies
1/2007 – 5/2019

For example, during the first four months of 2019, the strategy used Tech, accumulating 27.6%, but in May/June 2019, it switched to Healthcare, gaining 4.13% (compared to the S&P 500 TR that gained a measly 0.25%). That helped the strategy end June with 32.83% (compared with 27.13% for Tech and 18.54% for the S&P 500 TR).

A natural question is whether including more than 1 sector improves or degrades these great results. We ran the strategy with 2, 3 and 4 sectors, picking the highest graded ones and normalizing the weights according to their weights in the benchmark. The results, also pointing to the stability of the method, show that 1 is better than 2, 2 is better than 3, and 3 is better than 4.

Here is the table of the results, followed by a chart.

Strategy	CAGR	STDEV
Top 1	16.61%	17.42%
Top 2	15.50%	16.31%
Top 3	14.99%	16.43%
Top 4	14.11%	15.58%
Bot 1	-3.05%	21.07%



SUMMARY

Picking the best sector each month is not a magic solution. You cannot be right 100% of the time, but if you are right significantly above 50% of the time, you are likely to beat the benchmark over a long period.

This article presented such a methodology, based on Alpha Vee fundamental momentum indicator, the AVSI. We compared the performance with different alternatives and demonstrated the success over a long and turbulent time.

Sector rotation has gathered importance as single stock picking is affected more and more by machines. Counting on fundamentals for sector selection is a prudent and solid approach.

Moshik Kovarsky is the CEO of Alpha Vee Solutions Ltd.

With 40 years of experience in Mathematical Algorithms, Computer Science, management and a successful IPO, Moshik co-founded Alpha Vee to introduce deep data analysis to the world of equity investment.

Alpha Vee (founded 2010) is a provider of smart beta strategies, based in Israel with a wholly owned US subsidiary.