SIFWay Surfers
Dylan Mingo, Rich Schettler and Zach Burrows
Professor Brogaard
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Sector Rotation Through Business Cycles Trading Strategy

Data File:

Data file showcasing all financial information, indicators, returns, and recommended purchases will be linked in discussion post and later included on the website.

Overview:

The Leading Economic Indicator (LEI) is a composite index developed by The Conference Board designed to signal peaks and troughs in the business cycle. It is used to predict future economic activity, typically covering a timeframe of about six months ahead.

The LEI consists of several individual indicators that are believed to lead the overall economy. These indicators are chosen because they have historically turned before the economy as a whole does.

State Street Global advisors conducted a study to explore the relationship between business cycles, the LEI, and sector performance during said business cycles.

The findings of the study showed a strong correlation between various sectors and business cycles.

Using historical LEI data, and distinguishing business cycle characteristics provided by State Street, we determined an approximation of where in the business cycle the market was. Following historical trends for previous cycles, we determined which sectors had previously outperformed the market during the next 6 months as shown in State Street's report, and conducted backtesting based on previous business cycle data. We did a correlation analysis of historical data against most recent data and found the 6 time periods with the closest correlation to the most recent 8 months. We then analyzed the next 6 months after these times from 2000 to 2023 and performance of recommended sectors to market returns.

Backtesting the strategy showed positive results, with our strategy outperforming S&P 500 returns 11/12 Times with an average 6 month return of 16.92% vs SPX with an average return of 0.57% over these intervals.

Backtest and Filter Criteria:

The two sectors we did our backtesting and analysis on are Basic Materials and Consumer Discretionary. After determining these were the sectors that would perform the strongest based

upon the current business cycle we dove into individual company factors that would make strong companies within the sector. The Student Investment Fund required criteria as listed below show the initial filtering criteria.

SIF Specific Filter Criteria:
- Currency USD
- Trading Status is Active
- Traded on United States Exchange
- Price > $10
- Trailing 12 Month EBITDA > $0 Million

After the given the SIF Specific filter criteria we used separate strategies for each sector. Basic Materials focused on a high growth strategy thus the strategy used was to filter by the criteria below.

Basic Materials (MATS) Strategy Filter Criteria:
- Price to Earnings (P/E) greater than Basic Materials Benchmark
- Return on Equity (ROE) greater than Basic Materials Benchmark

This then left us with a range of 4-12 companies that met the criteria during the 6 most highly correlated backtesting timeframes. We believe that companies that meet this criteria would be large growth companies that in a time of a strong business cycle would outperform their peers in the relative sector. As shown in our results linked in the excel file and shown below this stands to be true.

We also wanted to use a similar strategy for Consumer Discretionary but instead focused strictly on Price to Earnings. The filter criteria for this is shown below.

Consumer Discretionary (CS) Strategy Filter Criteria:
- Price to Earnings (P/E) ranked 5-14 highest within Consumer Discretionary Sector

The criteria returned 10 companies, which are the 5th through 14th highest P/E. We believe that this range would disclude the extremes in valuation, focusing more on growth potential as well as stability. Companies in this criteria are going to be more established and will outperform the sector within this business cycle. Although investors are willing to pay a premium for earnings, we want to capture the optimistic sentiment for the next 6 months.

Backtesting Results.

Backtesting our recommended strategy of target sectors, and focusing on growth companies within those target sectors yielded results are attached at the end of this report as Appendix A and includes the alpha, beta, std deviation, Sharpe ratio, Treynor Ratio, max drawdown, info ratio, and idiosyncratic risk. .

A brief snapshot of results is shown in Table 1, which shows the total return for the next six months (our proposed investment timeline), as well as the 1 year returns.

Timeframe	Ticker	6 Month (Proposed)	1 Year	Timeframe	Ticker	6 Month (Proposed)	1 Year
2001-2002	SIF (MATS)	15.35%	20.46%	2007 - 2008	SIF (MATS)	14.31%	121.31%
	SPX	-5.90%	-16.51%		SPX	-8.98%	-11.07%
	DJUSBM	5.21%	-7.89%		DJUSBM	3.19%	8.88%
	SIF (CS)	23.22%	11.12%		SIF (CS)	-15.69%	-37.00%
	SPX	-5.90%	-16.51%		SPX	-8.98%	-11.07%
	S5COND	0.38%	-14.54%		S5COND	-14.35%	-16.60%
2002-2002,3	SIF (MATS)	-8.33%	-11.06%	2009 - 2009,10	SIF (MATS)	45.93%	10.48%
	SPX	-28.35%	-23.40%		SPX	23.82%	14.42%
	DJUSBM	-25.62%	-23.73%		DJUSBM	40.09%	24.35%
	SIF (CS)	-10.95%	-10.51%		SIF (CS)	24.41%	15.52%
	SPX	-28.35%	-23.40%		SPX	23.82%	14.42%
	S5COND	-27.04%	-26.53%		S5COND	31.42%	28.07%
2007 - 2007	SIF (MATS)	13.29%	46.08%	2020 - 2021	SIF (MATS)	29.66%	17.38%
	SPX	4.23%	-4.61%		SPX	18.62%	29.99%
	DJUSBM	15.85%	20.58%		DJUSBM	28.77%	27.67%
	SIF (CS)	19.15%	-15.29%		SIF (CS)	52.74%	42.27%
	SPX	4.23%	-4.61%		SPX	18.62%	29.99%
	S5COND	-5.19%	-16.30%		S5COND	11.40%	19.15%

From the table we can see that the materials portfolio outperforms SPX 6/6 times, and its relative index, a materials sector ETF, 5/6 times during the proposed investment timeline.

We also see the consumer discretionary portfolio outperforming SPX 5/6 times and its relative index, a consumer discretionary sector ETF, 4/6 times 3 of them when the portfolio also outperformed SPX, during the proposed investment timeline.

Recommended Purchases:

After the conclusion of our series of backtests and data analysis proving the strength of the strategy we used and equity screening in bloomberg to pull the current companies that meet our criteria to be included in the strategy. We decided to equally weight these purchases to align with our backtest weighting and divided the capital allocation 50/50 between both strategies even though they have a 10 to 7 count for Consumer Disc. to Materials.

Below are the consumer discretionary recommended purchases:

CONSUMER DISC.							
Name	Ticker	P/E Ratio	Trading Volume	Market Cap (mm)	Share Price	# of Shares	Total Value
Gap Inc	GPS	109.38	2378124585	7770.8	$ 20.95	281	$5,886.95
AZEK CO Inc.	AZEK	100.99	4347597690	5656.9	$ 38.30	154	$5,898.20
WINGSTOP Inc.	WING	110.53	28915497639	7492.9	$ 254.73	24	$6,113.52
ON HOLDING AG	ONON	279.99	3384996426	9486.6	$ 29.82	198	$5,904.36
SHAKE SHACK	SHAK	251.61	8359193052	3115.1	$ 73.64	80	$5,891.20
FIRST WATCH RESTAURANT GROUP	FWRG	100	2255529141	1188.6	$ 19.87	297	$5,901.39
MARCUS CORPORATION	MCS	454.35	1668660210	465.9	$ 14.70	401	$5,894.70
ATOUR LIFESTYLE HOLDINGS	ATAT	500.5	1925202528	2333.6	$ 16.96	347	$5,885.12
NATIONAL VISION HOLDINGS	EYE	537.21	2260069713	1557.9	$ 19.91	296	$5,893.36
CHEGG Inc.	CHGG	189.28	329312004	1283.2	$ 11.08	531	$5,883.48

Below are the materials recommended purchases:

MATERIALS							
Name	Ticker	P/E Ratio	Trading Volume	Market Cap (mm)	Share Price	# of Shares	Total Value
Sherwin Williams	SHW	30.39	7032740472	73626.1	$ 287.64	21	$6,040.44
ECOLAB Inc.	ECL	39.06	3186954100	54262.1	$ 190.30	31	$5,899.30
WD-40 Co.	WDFC	48.73	3931525720	3182.6	$ 234.76	26	$6,103.76
AVERY DENISON	AVY	26.52	3234683050	15554.6	$ 193.15	31	$5,987.65
AVIENT	AVNT	30	594518500	3236.2	$ 35.50	166	$5,893.00
DUPONT DE NEMOURS	DD	27.86	1182840610	30373.9	$ 70.63	84	$5,932.92
AIR PRODUCTS AND CHEMICALS	APD	23.41	4375656160	58058.4	$ 261.28	23	$6,009.44

Below are the totals for the purchase:

TOTAL VALUE:	$ 101,018.79
TOTAL COUNT	17.00

TARGET TOTAL	$ 100,000.00
AVG. ALLOCATION	$ 5,882.35

Strategy Monitoring:

To monitor the strategy we will have to conduct our quarterly rebalance which we will perform on March 22, 2024 to accurately rebalance and re-weight the companies within our strategy. We only plan to hold the strategy until June 22, 2024 where we will sell off our entire positions and reallocate capital as deemed fit.

Summary

Based on our backtesting results for the strategy, we see a majority percentage of test times outperforming the market.

Because of this, our recommended purchases represent growth companies in the target sectors for the future business cycle, poised to generate alpha for the fund.