All-Season Investment Strategy I: Using Economic And Technical Indicators To Protect Your Portfolio In Bear Markets

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Disclosure: I am long SPY, AGG.

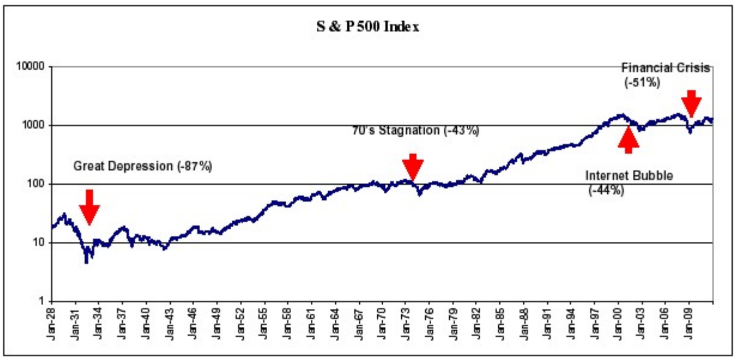
Rule No.1: Never lose money. Rule No.2: Never forget rule No.1.

- Warren Buffett

In this three-part investment strategy series, I will discuss some investment strategies that can protect your portfolio, and potentially profit in market downturns. During the last decade, we experienced two deep bear markets as a result of an internet-bubble burst and a financial crisis. Many investors saw their hard-earned savings shrink. Their retirement plans were put on hold. Traditional buy-and-hold strategy, which worked well during the secular bull markets in the 80's and 90's, proved inadequate in helping investors achieve their financial goals. In this article, I will introduce a dynamic strategy which will focus on reducing risks in the bear markets. As a result, the strategy beats the market with much lower downside risks over an entire market cycle.

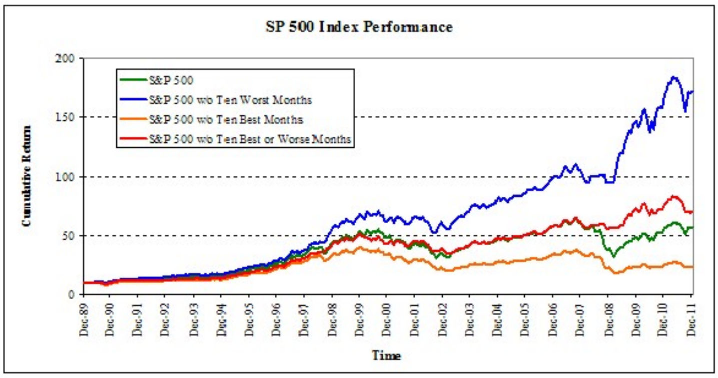
Historically, major market drawdowns were deep and it took a long time to recover from the losses (see Figure 1). The worst drawdown happened during the Great Depression. The market declined by 87% and recovered after 14 years. The second worst draw down occurred during the financial crisis in 2007-2009. The market tumbled by 51% and has not recovered after three years. In those periods, investors saw their 401K turned into "101K". The buy-and-hold investors started to hold and "hope". Even worse, many investors became panic sellers who sold their stocks at the bottom of the markets and were afraid of getting back in when the new bull market began.

Figure 1: Major Draw Downs in the Equity Markets



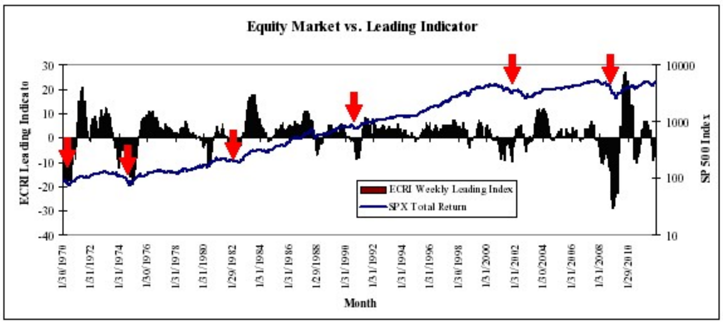
The buy-and-hold advocates have long argued that investment return would have decreased significantly if investors missed some of the best days. However, more importantly, investors can also improve their performance dramatically if they can avoid some of the worst days. During the last twenty years, if investors had missed the ten best months, their returns would have dropped by 4.3% annually. However, if investors had avoided the ten worst months, their returns would have increased by 4.8% annually. Even if investors missed both the best and the worst ten months, their returns would have been slightly better than S&P index, and with much lower volatility (see Figure 2). The drawdown was -33%, compared to -51% of S&P 500 index in the same period. This has shown that avoiding big losses is as important as, or even more important than making big gains.

Figure 2: S&P 500 Index Performance without the Ten Best or Worst Months



Therefore, downside protection should be paramount in any investment program. I will introduce two indicators that can help identify market downturns early on. The **leading economic indicator (LEI)**, published by Economic Cycle Research Institute, is a weighted average of ten different economic and financial indicators. It is useful because most of the market downturns coincided with economic recessions. During last 40 years, negative LEI identified all the major bear markets, though it mis-classified some short-term market drops as bear markets (see Figure 3).

Figure 3: Leading Economic Indicator and Stock Market Performance



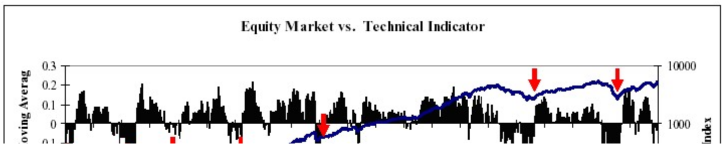
I have tested the effectiveness of LEI with a simple timing strategy: buy S&P 500 Index if LEI >0, otherwise buy Barclays Capital Aggregate Bond Index. The results are shown in Table 1. The timing strategy performed a little better than buy-and-hold in terms of average return, but the volatility and the drawdown are much smaller. Especially, the drawdown of LEI Timing is only half of the buy-and-hold strategy

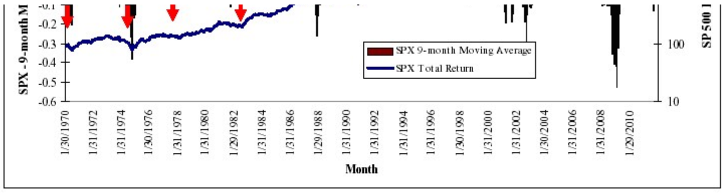
Table 1: Performance: LEI Timing vs. Buy-and-Hold

Performance Statistics	LEI Timing	Buy and Hold
Average Monthly Return	0.9%	0.9%
Monthly Standard Deviation	3.4%	4.5%
Annualized Return	11.0%	10.6%
Annualized Standard Deviation	11.9%	15.7%
Sharpe Ratio (Risk-free Rate = 5.5%)	0.5	0.3
Maximum Drawdown (Loss)	23.3%	50.9%
Expected Time to Recover (yrs)	2.1	4.8

Another useful indicator is a technical indicator called **moving average (MA)**. Typically, technicians use moving averages to define market trends. When the market is trading above its moving average, the market is rising and on an uptrend, and verse versa. Figure 4 shows how MA can be used to identify market downturns. I used 9-month simple moving average for our analysis. MA has identified all the major market downturns because most of the bear markets last for a while.

Figure 4: Moving Average and Stock Market Performance





I also tested another simple timing strategy with moving average: buy S&P 500 Index if current price > 9-month moving average, otherwise buy Barclays Capital Aggregate Bond Index. The results are shown in Table 2. The MA timing strategy performed better than buy-and-hold in terms of both returns and risks. The average annual return of the timing strategy is 2% higher, while the drawdown of MA timing is only half of the buy-and-hold strategy. The strategy beats the market by avoiding the market downturns.

Table 2: Performance: Moving Average Timing vs. Buy-and-Hold

Performance Statistics	MA Timing	Buy and Hold
Average Monthly Return	1.1%	0.9%
Monthly Standard Deviation	3.5%	4.5%
Annualized Return	12.7%	10.6%
Annualized Standard Deviation	12.2%	15.7%
Sharpe Ratio (Risk-free Rate = 5.5%)	0.6	0.3
Maximum Drawdown (Loss)	23.3%	50.9%
Expected Time to Recover (yrs)	1.8	4.8

So far, I have introduced two simple indicators that can help identify market downturns and manage your risks in the bear markets. When they apply these indicators to manage their portfolios with discipline, investors can outperform the markets by avoiding major losses.

To help investors, I have developed a composite risk indicator which consists of five most reliable economic and technical indicators to make risk reduction recommendations. I will update it every month on my blog allseasoninvesting.com.

Continue to Part II >>