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BEYOND BUY AND HOLD

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*“By changing nothing, nothing changes”
- Tony Robbins*

Since the onset of the 2007-2008 financial crisis there have been numerous statements, reports and articles regarding the death of buy and hold as an investment strategy. We thought it only right to put forth an obituary for the old saw.

Buy and Hold age 40 years lived in most investor portfolios for the last 40 years. Died in September, 2008 from excessive central bank intervention into the US economy. Buy and hold is survived by just about every mutual fund company marketing department and a few larger brokerage firms. Buy and hold served investors well but struggled mightily as interest rates were lowered to the floor. Buy and hold's decline was marked with increased market volatility and epic levels of asset correlation. In lieu of flowers please donate to the movement to end the Federal Reserve.

By definition

Buy and hold is often, questionably, referred to as an investment strategy. Most investment advisors that have managed money over the last 30 plus years have likely spent sometime (if not their entire career) singing the praises of the non-strategy. Make no mistake buy and hold served investors and the financial services industry fairly well until the year 2000. Since 2000 investors have struggled and since 2008 the financial services industry has joined the struggle. Although the financial services industry arrived late to the struggle assets are flooding out of mutual funds and away from advisors that continue to hold their clients captive to a dated approach to investment management.

In our opinion, to be useful an investment strategy must address four critical items. Those items are:

- when to buy
- how much to buy
- when to sell
- how much to sell

If you use the previous as the minimum standards to qualify as an investment strategy, then buy and hold fails the test since it only addresses the buying.

A little history

In the 1990's the financial services industry latched on to investment portfolio research from Harry Markowitz. While a PHD student in the 1950s, Mr. Markowitz, pioneered research on investment portfolio risk, correlation and returns. In 1952 Markowitz published an article on his research and then in 1955 published his book titled "Portfolio Selection." From Markowitz's book came Modern Portfolio Theory (MPT). In 1990, Markowitz won a share of a Nobel Prize in Economics for his research. According to the website Wikipedia.com MPT is:

“The fundamental concept behind MPT is that the assets in an investment portfolio should not be selected individually, each on their own merits. Rather, it is important to consider how each asset changes in price relative to how every other asset in the portfolio changes in price.”

We believe Markowitz's work was ground breaking and important to opening the thought process for investment portfolio management but not an end.

The Nobel Prize notoriety in 1990 created a burst of interest in Markowitz's MPT. MPT subsequently became a marketing machine and asset retainer for the financial services industry. The industry took MPT and turned it into computer driven investment modeling supported by fancy charts and a great Nobel Prize story.

Let's pause in our story and consider what many investment advisors were doing in the 90's. Suppose broker/advisor Joe Smith worked for Big Box Brokerage company. At Big Box, Joe's primary job was to drum up business through calling thousands of people a day attempting to set up meetings. So, if the overwhelming majority of Joe's time was

on the phone, on the golf course or at networking meetings when did he have time to manage money? You are right, he did not have time. Once Joe signed on a new client the administrative staff would get the new client set up, Joe would look for new clients and the current client money needed to be invested. What Joe needed was a simple, easy to explain, low time commitment way of investing money.

Markowitz's work allowed the industry to create computer models (who could argue with anything computer generated) that showed how to build a "diverse" portfolio with "low risk" profiles. Now, broker Joe Smith could have a computer spit out an allocation (based on Nobel Prize winning research) and Joe could fill the allocation requirements from the stable of mutual funds that Big Box Brokerage had to offer. The new client portfolio was set and ready to forget as Joe resumed searching for new clients.

Wait a minute

Tragically, many investment advisors have never read Markowitz's "Portfolio Selection" book yet will wax on about MPT and the Nobel Prize winning work that supports their portfolio recommendations. If an advisor took the time to read the book or even parts of the book they would realize that MPT was an imperfect beginning not an end. Once someone took the time to read Markowitz's book it became clear that Markowitz had to resort to using simpler data since he was working with the computing power of today's digital watch. This limited computing power led Markowitz to use less than optimal risk measurements for his calculations. Using a less than optimal risk measure when the whole point of the research is risk related should make an intelligent person wonder if there are better ways to address risk.

Marketing buy and hold

With MPT's Nobel Prize story, computer generated optimal portfolios, a busy society, and a friendly investment environment in the 1990's what was not to love for both the investor and advisor. The best thing a mutual

fund company or brokerage firm could do for themselves was to persuade investors not to sell their mutual funds or move their investments. The bottom line was that fund companies and advisors wanted "sticky money." This is still the case today. Just look at the marketing material from almost every mutual fund company. On a more than regular basis mutual fund investors are told about the potential impact of missing the best days in the market. Hence, investors must stay invested. As well, most mutual fund company reports and updates have been market cheerleaders or uber-optimists even in the face of economic destruction. Buy and hold was/is a win for advisors as it facilitated more time to add new clients and a win for fund companies because investors were convinced they must stay invested or else they may miss the next up day.

The one study that every equity mutual fund manager (often advisors too) love to drag out is the chart that tells you what happens if you miss "x" of the good days in the market. Below is an example of one of these charts.

Returns for the S&P 500 for 25 years ending 12/31/08

If you missed the best "x" days Missed	Average Annual Returns
10	4.10%
20	2.15%
30	0.54%
40	-0.93%

Below is the rest of the story.

Returns for the S&P 500 for 25 years ending 12/31/08

Days Missed	Missing Best	Missing Worst	Missing Best and Worst
10	4.10%	11.23%	8.15%
20	2.15%	13.80%	8.58%
30	0.54%	15.83%	8.61%
40	-0.93%	17.59%	8.82%

(Source: NAAIM, Inc., This data is for illustrative purposes only and is not indicative of the actual performance of any investment. S&P 500 Index returns do not reflect reinvested dividends.)

The results above, from the full story, reveal that missing the worst days is more important than getting the best days. Obviously, missing all the best or worst days is not possible but is it possible to get close to missing both the best and worst? This assumes the consistency of returns in missing both the best and worst days is attractive.

Beyond buy and hold

In the world of investment management many advisors look at either market fundamentals, technicals or both. Fundamental analysis looks at the underlying health of companies and the markets. Technical analysis looks at a company or the market's historical data to gauge the direction of securities.

Three technical indicators are widely considered to be solid gauges of the health of a market or a security. Those indicators are the 50 day exponential moving average (EMA), the 200 day EMA, and the 50/200 day EMA crossover (Gold Cross on the upside or Death Cross on the downside).

To clarify a simple moving average (SMA) is a moving average price of a security over "x" period of days. The formula for the 50 day SMA is the total of the prices for the past 50 days divided by 50. The EMA is a similar

formula only weighted toward the most recent prices.

50 day EMA

The 50 day EMA is considered a short-term trend indicator. Short-term traders will use the 50 day EMA as their buying and selling trigger. If the price of a security rises above the 50 day EMA the trader will buy and if it falls below the trader will sell.

200 day EMA

The 200 day EMA is considered a longer-term trend indicator. Long-term investors will use the 200 day EMA as their buying and selling trigger. If the price of a security rises above the 200 day EMA the investor will buy and if it falls below the trader will sell.

EMA Crossovers

The EMA crossovers look at the 50 day and 200 day EMA together. Instead of looking at the price of the security in relation to either of the moving averages an investor will look at where the 50 day EMA is in relation to the 200 day EMA for a given security. For instance, if the 50 day EMA of the S&P 500 goes below the 200 day that is a strong signal to sell (called the Death Cross). Alternatively, if the 50 day EMA goes above the 200 day EMA that is a strong signal to buy (called the Gold Cross).

Utility of the moving averages

Below is a study comparing a buy and hold strategy and a strategy around the moving averages. The purpose of the study is to determine which strategy has the highest return, lowest volatility, lowest drawdown, and highest cumulative return. In this study the Vanguard 500 Index Fund's (ticker VFINX) pricing was used from 1/1/1989 to 12/31/2011. Dividends were reinvested in each strategy. Since there was no exchange-traded fund 20+ years ago, the VFINX was used. To compensate for trading costs I added in \$10 trading costs for each buy and sell. Taxes were not considered. The starting balance was \$2689 for each strategy.

The following are an outline of each approach:

- **Buy and Hold** - as simple as it sounds
- **Out under 200 day EMA / In on Gold Cross** - If the fund goes below its 200 day EMA it is sold and sat in cash. If the fund's 50 day EMA crosses over its 200 day EMA (Gold Cross) it was bought back. Additionally, there were periods where the fund crossed under its 200 day EMA but did not go into a death cross. Therefore, when the fund moved back above its 200 day EMA it was bought.

Year	Buy and Hold	Out 200 in Gold X
1989	32.77%	32.77%
1990	-3.33%	-2.72%
1991	30.25%	19.55%
1992	8.21%	7.94%
1993	9.12%	9.12%
1994	1.18%	0.51%
1995	37.45%	33.71%
1996	22.86%	21.77%
1997	33.21%	33.21%
1998	28.62%	24.87%
1999	21.07%	22.27%
2000	-9.06%	-1.28%
2001	-12.01%	0.00%
2002	-22.15%	0.00%
2003	28.50%	16.33%
2004	10.74%	10.54%
2005	4.77%	5.63%
2006	15.64%	13.20%
2007	5.39%	8.41%
2008	-37.02%	0.00%
2009	26.49%	12.97%
2010	14.91%	3.80%
2011	1.97%	-3.96%
Begin Value	\$2,689	\$2,689
End Value	\$19,868	\$30,145
Standard Deviation	19.04%	11.97%
Drawdown '00-'02	47.40%	6.40%
Drawdown '08-'09	56.10%	5.90%
# of Trades	1	34
Profitable Trades	1	25
% Profitable Trades	100%	74%
Cummulative Return	595%	1,038%

Explanation of results

The alternative outlined to buy and hold had lower volatility as measured by standard deviation and much higher cumulative

return. Standard deviation is a statistical measurement of how far something moves from its mean both above or below. The higher the standard deviation the higher the volatility of the investment.

One important item to understand about both moving averages and the gold/death cross is that they are both trailing indicators. Meaning the trend of the investment has already taken place by the time the EMA or gold cross is triggered.

The strategy follows the philosophy of quick to get out and slow to get back in.

Answering the question

The question was is it possible to miss both the best and worst days in the market? Perhaps we can answer this question using the 200 day EMA. The chart below is based on the prices of the Vanguard 500 Index fund (ticker VFINX) from the period 1/3/1989 to 12/31/2011. This study reveals how many of the best and worst days in the S&P 500 occurred below its 200 day EMA.

Under 200 Day EMA	
Worst	Best
155 of 200 - 77%	137 of 200 - 68%

(Source: Lighthouse Wealth Management This data is for illustrative purposes only and is not indicative of the actual performance of any investment.)

Take away

Should investors move beyond buy and hold?

This study has demonstrated that through a simple, not perfect strategy it is possible to achieve higher returns with lower risk than a buy and hold approach.

- Lower volatility
- Higher cumulative returns
- Smaller drawdowns
- Miss more bad days than good days