Letters to the Editor – Moving Average: Holy Grail or Fairy Tale?

June 23, 2009

The following letters are in response to Ted Wong's article last week, [Moving Average: Holy Grail or Fairy Tale - Part 1](#):

Mr. Wong:

I found your piece in *Advisor Perspectives* very interesting. We have looked at systems like this in the past, as an overlay to our mainly fundamentally driven investment process.

One question – what were you trade signals, i.e., when did you "buy" or "sell"? Given that prices often trade through moving averages then reverse – when did you take your trades?

For example - if the index crosses DOWN thru the MAC - on a Tuesday - is it registered as a SELL by your system? What if closes above on Thursday - is that now a BUY?

Do you look at the data on a daily, weekly, or monthly basis? And if you are using a monthly basis, do you take the level of the MAC at the time of the cross or the closing price for the month?

Also have you ever done this real-time, or is this all theoretical?

Sincerely,

Jerry Jordan
President
Hellman, Jordan Management Co., Inc
Boston, MA

Ted Wong replies:

Jerry,

Thank you for your feedback.

The signals are defined by the MAC rules. You follow the signals mechanically even if sometimes they are wrong. You will have bad calls during sideways markets from any trend following system. But the frequency of trading, as shown in my article, is quite low. The question one has to ask is whether the overall gain at the end of the journey is good enough to compensate for the occasional losses along the way. That is why I use both CAGR and drawdown to compare investment systems.

I use the trend-following systems I developed in real-time trading, but I didn't use the 6-month MAC. I am not publishing this series to suggest that MAC or any other system should be used as an active management system. I simply took the most basic approach known by all (the MAC system) to illustrate my point: buy-and-hold is not the only sound investment doctrine and active investment works as well as passive management based on returns, and much better based on risk control.

Back to your question - you buy in the same month that the index crosses above its MA, and sell if the very next month it drops below. Sell signals would be just the opposite.

My test results are based on same-month trading. You could argue that you can only execute buy/sell signals on the last day of every month, and you must project the last day's close before it actually closes. With real-time quotes and high-speed internet, that would not be impossible. Of course, you couldn't have done that in 1871.

One clarification: I used Prof. Robert Shiller's database which is based on the monthly average closing price (http://www.econ.yale.edu/~shiller/data.htm) of S&P500, not the last day's close.

Hope this helps!

Ted

Mr. Wong,

I read your recent article in *Advisor Perspectives* re Moving Averages.- Very fascinating info. I love this stuff.

I have dabbled in this since the mid 1990s and got more serious in the early 2000s. I sent the following to all my clients in April 2003 (I've saved the email):

> WE ARE AS CLOSE TO A MARKET GREEN LIGHT THAT YOU WILL EVER HAVE WITHOUT A CRYSTAL BALL........
>
> The NASDAQ 100 chart is at the same pattern that it had in FEB'91 and MAY'95 when the markets began 3 and 5 1/2 year, respectively, up-swings, after market corrections (one yr and 9 mos., respectively).

> The price and 50-day moving avg have been above the 200-day moving avg for several weeks and the 200-day moving avg is turning up. This hasn't happened once since the market turned down in 2000 and, as I said before, not since beginning market recoveries in '91 and '95.
>
> If you're not familiar w/ moving avg's, all they do is smooth out the daily price fluctuations of an index or a stock in order to be able to see trends and trend changes more easily. The 200-day avg is a major indicator of market movement and trend direction.

I only wish I had known more in the late 1990s and strictly adhered to it during the past two years. (I did enough so that my clients rode through 2008 relatively better than the market, but I could have been a real hero with unwavering and unemotional adherence).

I have a few questions:

1. When will Part 2 come out?
2. Are there more detailed reports available vs. these articles?
3. My current dabbling re MA's includes studying "Gaps" between price highs and lows vs. the 200 day MA to get an earlier indication of direction change.

In regard to the third question, let's say price is moving up at a 30 degree angle and is steadily 10-20% above the 200 day MA. It accelerates to a 45 degree angle and moves over a 30% Gap (my Yellow Flag) and may move 40-50% or more above the 200 day MA (or likewise on the downside). Once in that 30%+ Gap realm, I then watch for an approximately 10% pullbacks from the high as a Red Flag, showing that the acceleration party may be over, in order to protect profits from falling much of the way back down (as institutional money starts to exit). I am also looking at short MACs vs. the 10% rule as a trigger point.

This has worked fairly well in theory and in the real world, but is difficult to track, at least with the charting systems I currently have. I am improving it as I go.

Does any of your work involve something like these "Gaps" vs. 200 MA's? From extreme market and stock moves, a lot can be left on the table waiting for a traditional MAC with the 200 day MA (e.g. Price at $150, 200 day MA at $100 – a 50% Gap. Where do you protect the $150 profit? The 200 day MA isn't very good in this scenario – extreme fall or long sideways before the two meet).

Thanks for any response you can give. I look forward to coming articles.

Steven A. Katcher, CFP, CFM
Vice President

ADVISOR PERSPECTIVES

Wealth Management Advisor

Jay W. Gazzier, CSNA
Assistant Vice President
Senior Financial Advisor
Wealth Management Services
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Clear Lake, TX

Ted Wong replies:

Dear Steve and Jay,

Thanks for sharing your research ideas. It sounds very interesting. Your "Gap" approach reminds me of some hedge fund systems I have seen, none of which are published in the public domain. Personally, I have not tried anything with an angel/slope other than testing different rates of change or swing thresholds. Maybe someday I will write about those results.

Part 2 will be published Tuesday, June 30. I am afraid that I don't have separate reports covering the materials.

My intention is not to endorse or promote any particular trading system, but simply to repudiate what I have frequently heard or read saying that passive investment as the only right way to invest.

Thanks again for your interest in my articles.

Ted

Mr. Wong,

Thanks for writing such a great article. Questions...maybe I missed it, but did you use the SMA or EMA in your testing? Would you consider the six-month SMA the ideal indicator?

Thanks,

Garret Norris
Multi-Financial Securities Corporation
Ft Myers, FL

Ted Wong replies:

Garret,

I used EMA as mentioned in the article, but I believe SMA wouldn't make a huge difference since the results are not very sensitive to the different EMA alpha coefficients.

As to which one is "ideal," I suggest you wait for Part 2 which may provide you with more insights.

Thanks,

Ted

Dear Ted,

I enjoyed your recent article in *Advisor Perspectives* entitled “Moving Average: Holy Grail or Fairy Tale - Part 1.” One of our advisors (a Civil Engineer with an MBA) has constructed a portfolio loosely based on the endowment style of asset allocation. To improve risk management he recently added a moving average crossover system. To determine the moving averages to use, he “optimized” the moving average pair for each asset class in his model using a system he created to test rolling 5, 10, 20 year periods. It was his determination that each asset class that he tested (outside of fixed income which is an “all-in” position for his model) had a set of moving averages that consistently outperformed others. Using these pairs and back-testing his model, he was able to improve on his original model. If you would like to speak with him, I’m sure he would enjoy a conversation, his name is Henry Harris and his number is 704-295-6603.

I’m curious to see the results of Part II of your story – although based on the title I’m not sure what the bottom line will be.

Thanks,

Tim Bain, COO/CFO
Synergy Investment Group, LLC
Charlotte, NC

Ted Wong replies:

Tim,

Thanks for sharing your colleague's research. I just finished Part 2, which will be published June 30. To give you a heads-up, there will be a Part 3. Stay tuned!

I think I will let you wait instead of telling you the bottom line now.

Ted

Theodore,

Thank you very much for the interesting commentary and analysis on the Moving Average. I have been studying this the past few weeks and am very intrigued by it.

You may be covering this in Part 2, but I am curious as to your opinion on how this applies to the current market environment. Does the increased volatility and speed at which the markets digest and apply information (or overreact!!) impact this analysis and its use going forward?

Look forward to Part 2!

Thanks

Matthew W. Tackman
Financial Advisor
The McDonald Group
Merrill Lynch & Co.
Ridgefield, CT

Ted Wong replies:

Matthew,

You have raised an important question: can any investment system adjust to the rapid and dramatic changes we experience currently? I have seen many so-called infallible technical indicators suddenly stop working. But the MAC system possesses several rather unique qualities that enable it to remain effective going forward.

First, it has worked over a very long time - for over a century. It has witnessed the

Industrial Revolution, two world wars, the creation of silicon wafers and the resultant microelectronic wonders, the Information Age, and the Internet Era. So I have confidence that MAC can handle the recent global systemic collapse and beyond. No other indicators or systems have such a long history of data showing that their effectiveness over time can be validated.

More importantly, MAC is a single-variable system, i.e. the length of the MA is the only thing you can tweak. You can't over-optimize MAC. In fact, curve-fitting is what kills most trading systems because once they leave the laboratory, they quickly stop working in real life.

Lastly, MAC is price-based. It does not depend on other secondary parameters such as interest rates or inflation numbers to trigger buy/sell signals. As such, it's inherently more robust.

As long as the markets show trending direction, no matter how weak, the MAC system will put you on the right side of trades. You don't predict or second guess the markets, you just follow.

Hope this helps!

Ted

Ted,

I enjoyed reading your recent articles in *Advisor Perspectives* (What the "Missing Out" Argument Misses and Moving Average: Holy Grail or Fairy Tale). I have never been a believer in the "buy and hold" fallacy and I appreciate the fact that you are trying to educate people about the misconceptions of this strategy.

I have been meaning to run some analysis of my own on the S&P data set (e.g., inflation adjusted returns and rolling 5, 10, 15, 20, 25, and 30 year returns). I have monthly S&P data from 1871-2009 that Professor Shiller was kind enough to post on his website. The data set also includes TTM dividends on a monthly basis.

After scrubbing this data set, I have two main questions that I would love to hear your thoughts on:

1. Why do you think Shiller is using average daily closing prices for the month-end index value (as opposed to just using the month-end closing price)? For

example, for month-end 12/31/08, he uses the average daily closing price of 877.56 vs. the actual month-end closing price of 903.25.

2. In your opinion, what is the most accurate way to calculate the total return (assuming dividend reinvestment) using the data I have (monthly index values and monthly TTM dividends)?

Also, if you wouldn't mind sharing the data set that you used for your analysis I would love to take a look at it.

Thanks in advance for your help,

Anonymous

Ted Wong replies:

Thanks for your feedback.

First, I used the same database in Part 1 from Prof Shiller, as referenced in my "Missing out" article. I have the same questions that you have regarding the way Shiller calculates the index and don't have good answers either. I'm afraid that you may have to ask the Professor yourself.

As far as which way is more accurate, I believe that if the duration is long (138 years), then any difference would be negligible because any non-compounded factors would be evened out. A shorter time frame, such as a year or so, would be a different story.

Good luck!

Ted