Efficient Markets versus Adptive Markets

A talk given at the Burridge Center for Securities Analysis and Valuation 11/12/2010

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Disclaimers

- What is presented here is akin to what I do at my website alephblog.com – Aleph Investments, LLC considers this an “outside business activity,” and so my firm bears no liability for anything written or spoken here.
- I am an investment professional, and like every investment professional, I make mistakes. I encourage you to do your own independent "due diligence" on any idea that I talk about, because I could be wrong. Nothing written here, or in my writings at RealMoney or Alephblog.com is an invitation to buy or sell any particular security; at most, I am handing out educated guesses as to what the markets may do. I am fond of saying, "The markets always find a new way to make a fool out of you," and so I encourage caution in investing. Risk control wins the game in the long run, not bold moves.
- You can find a list of my stockholdings here.

Myth – EMH Means The Price is Right?

- Particularly during this current economic crisis, many have criticized the EMH as being wrong, because the prices of assets changed dramatically for the worse.
- This comes partly because many EMH proponents have made incautious statements with respect to what it means that current prices are the product of all current and past information.
- Neglects the idea that price movements seem random in the short-run, in the intermediate-run, there are momentum effects and later still, mean-reversion effects.
- Expectations hypothesis – estimated future short-term rates are rarely good predictors of future short-term rates, but they do reflect the collective judgment of the actors in the market.
- This applies to covered interest parity with currencies as well.
- Market prices reflect the judgment of the market at a single point in time, not an inviolable law of God, that can't be changed.

Are Investors Rational?

- Investors are boundedly rational, in my opinion. It is costly to gather data and think, so people seek shortcuts. Examples:
- Many are slow to react to new information.
- Institutional investors often turn down promising ideas because they don't fit into the risk management schemes of consultants, or, the biases of their boss or peers.
- They imitate the behavior of seemingly successful players, because thinking independently is hard.
- Males particularly try to hit "home runs," but end up with many strikeouts. Women seem to do better with risk-return tradeoffs.
- Many investors have a compulsive desire to get back to even on losing investments, rather than selling out and buying something better.
- And more… I would say we aren't the profit-seeking *homo oeconomicus* as posited by economists.

Anomalies

- Cheap valuation, book, earnings, sales, dividends, EBITDA
- Price momentum with mean-reversion over longer periods
- Low accrual accounting entries as a fraction of earnings or assets; Piotroski's accounting criteria
- Low net stock issuance; low asset growth
- Positive earnings surprises
- Low historical return volatility
- Illiquidity, which is a proxy for size and neglect
- Return negatively correlated with risk – Bond studies, Morningstar study
- Minimum variance portfolios tend to outperform, so do minimum beta
- Insider Purchases
- Alphaclone

Sources:

- *What has worked in investing?*
- Finding Alpha
- CXO Advisory

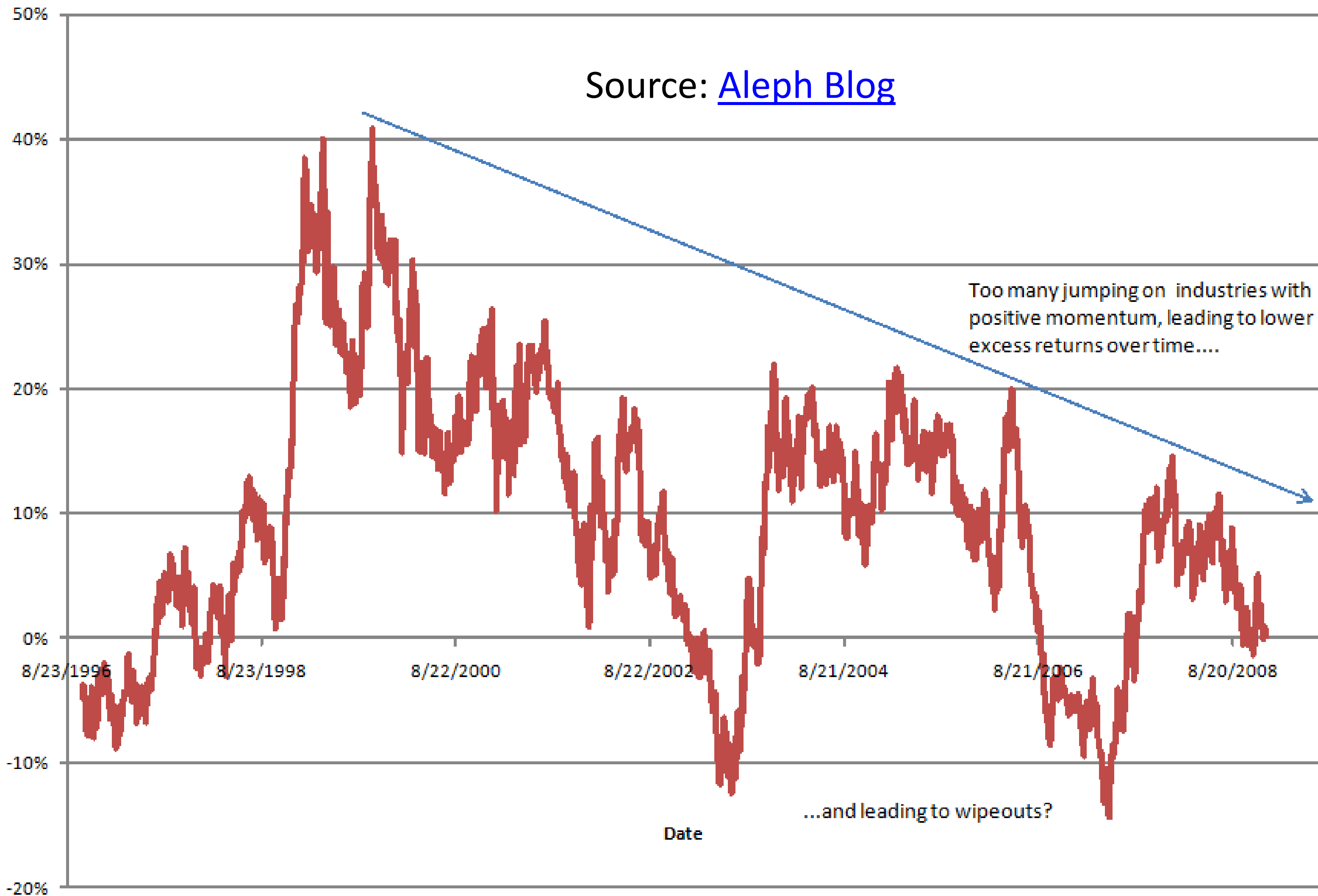
What Many Quantitative Equity Hedge and Mutual Funds Do

- Choose your trading time horizon – shorter-run will be more momentum-driven, longer will include more fundamental factors.
- Decide what factors or anomalies are relevant to stock pricing
- Define the universe of stocks
- Estimate expected return on the various stocks over the time horizon
- Go long stocks with expected high returns, and short those with low returns, subject to diversification constraints which might include limits on: factor exposure, industry, portfolio weight, liquidity, etc.
- Same applies to long only mutual funds

How it Failed in August 2007

- Falling returns led to:
- Use of leverage – Up, then down
- Growth beyond the liquidity capacity of the stocks owned – who is there to take the other side of your trade?
- Crowded trade – valuation and momentum
- "Events that models only predicted would happen once in 10,000 years happened every day for three days.“
- Similar to failures like RMBS (1994), LTCM (1998), Tech stocks and momentum (2000), Correlation crisis (2005), housing/debt bubble crisis (2005-?)
- Should cut off complex trades when unlevered returns are less than what can be obtained by investing in Single-B bonds.

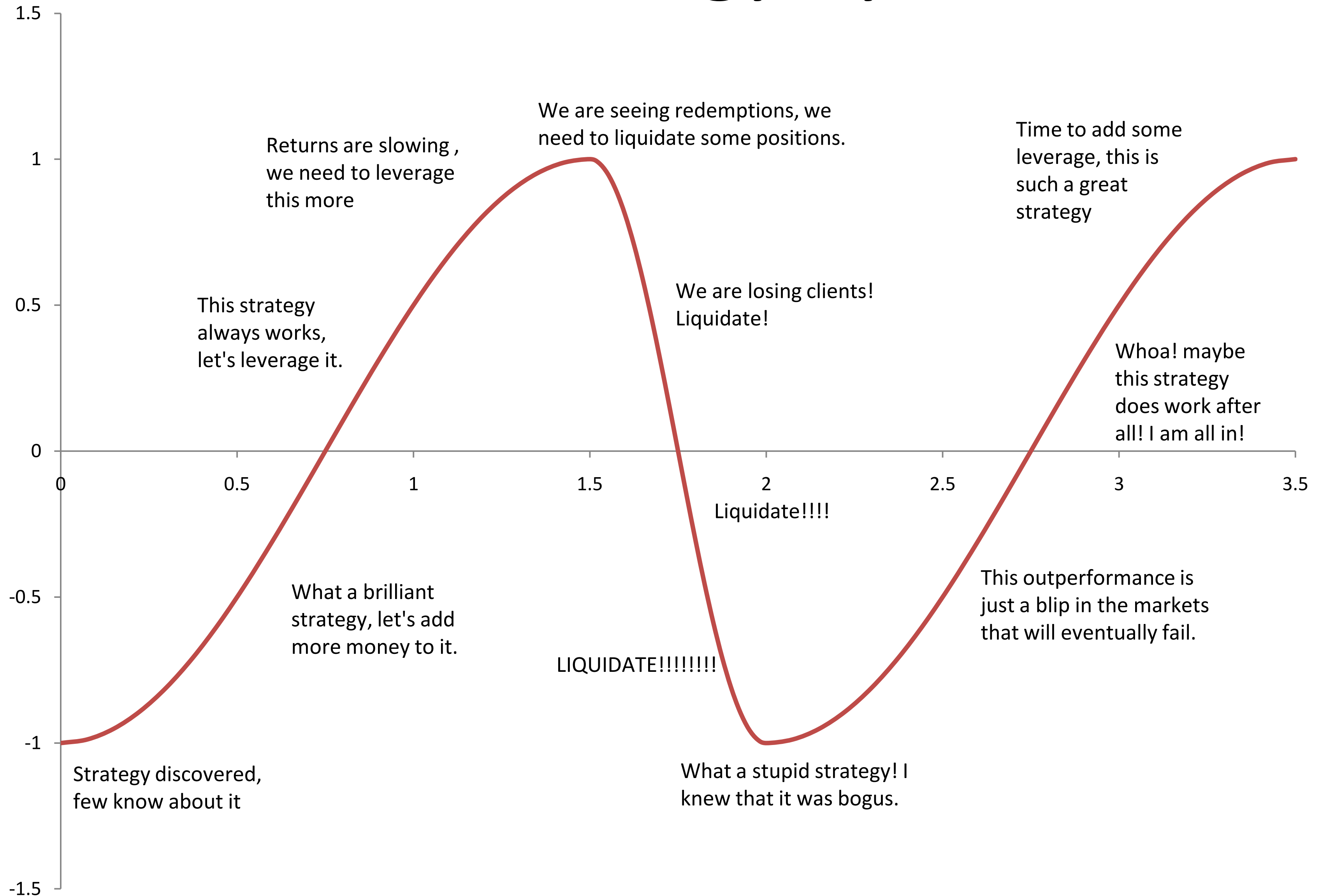
Industry Momentum Example



The Adaptive Markets Hypothesis

- The AMH argues that markets are like an ecology.
- Different players pursue different strategies to earn scarce excess returns.
- When one strategy gets too many players, it overshoots and crashes. Then players leave the strategy, accentuating the decline, until everyone knows that the strategy doesn't work.
- That's the best time to adopt the strategy, but few do so because of behavioral biases.

The Strategy Cycle



Summary

- The recent crisis does not mean that the EMH is wrong; the EMH should make no long-term claims with respect to the long-term accuracy of prices.
- The EMH is right and useful as a limiting concept.
- Momentum, Value and other factors have tended to earn excess returns over time, partly due to foibles of human nature, because man is not fully rational in the way that economists believe.
- Attempts to earn excess returns push the market closer to the EMH. Excessive efforts to earn excess returns can lead to severe turbulence.
- The Adaptive Markets Hypothesis is a better explanation of market behavior, as it takes into account both market anomalies, and the tendency toward efficiency.

Epilogue Scene One — Efficient Markets Hypothesis

Source: Aleph Blog **Efficient Markets Versus Adaptive Markets**

Epilogue Scene Two — Adaptive Markets Hypothesis, Part 1

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Epilogue Scene Three — Adaptive Markets Hypothesis, Part 2

Epilogue Scene Four — Adaptive Markets Hypothesis, Part 3

Epilogue Scene Five — Adaptive Markets Hypothesis, Part 4

About Me

- 2010-Present – Runs Aleph Investments, LLC, which manages equity portfolios
- 2008-2010 – Chief Economist and Director of Research of Finacorp Securities
- 2007 – Started my website Alephblog.com.
- 2003-2007 – Senior Investment Analyst at Hovde Capital. I also managed the internal profit sharing and charitable endowment monies of the firm.
- 2003-2007 – Leading commentator at the excellent investment website RealMoney.com. James Cramer invited me to write for the site.
- 2001-2003 – Corporate bond manager for Dwight Asset Management.
- 1998-2001 – Mortgage Bond and Asset/Liability manager for Mount Washington Investment Group (St. Paul Companies)
- 1992-1998 – Investment Actuary, Provident Mutual
- 1986-1992 – Actuary, Pacific Standard and AIG
- Bachelor's and Master's degrees in Political Economy from The Johns Hopkins University. (1982)

For Further Reference

- How Wall Street Looks at Insurance Companies
- Residential Real estate pieces – Tops and Bottoms
- Equity Market pieces – Tops and Bottoms
- Subprime piece (Novenmber 2006)
- Buy High Yield piece (November 2008)
- AIG piece (used by SIGTARP)
- Loss Severity Leverage – on an unnamed mutual insurer.
- An Amazing Ten Years for Insurance Stocks
- Past the Peak of the Credit Cycle – SOA Annual Meeting 2007 Presentation
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