# 2013 New Year, New Approaches, New Tools

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AAII Computerized Investing Seminar - 11/10/12

Marc H. Gerstein, investment analyst and commentator and author of Screening the Market (Wiley, 2002) and The Value Connection (Wiley 2003) specializes in rules-based equity investing strategies that go beyond the "hot" stocks one hears most about and search far and wide for companies (whether widely publicized or little known) that demonstrate fundamental excellence. He has been using stock screeners since the mid-1990s, and has been actively back-testing since 2008, when he has been working with Portfolio123.com and StockScreen123.com. Gerstein's strategies incorporate all major investment styles (growth, value, quality and sentiment – he is nonjudgmental as to how stocks demonstrate excellence; he just wants them do it). He is also the Editor of the Forbes Low-Priced Stock Report, a newsletter that applies a screening strategy focusing on trade-able stocks priced no higher than \$3.

#### **Seminar Topics**

- Can the individual investor build on what the very best investment professionals do?
- Do stock screening and analysis still play a role?
- Do back testing and optimization really work or are they just adult video games?
- How can these techniques and tools be applied to stocks, ETFs and mutual funds in a reasonable amount of time – without requiring a PhD?
- How do these interact with asset allocation and life cycle investment strategies?

Q. Can the individual investor build on what the very best investment professionals do?

A. Yes – Absolutely!

## Individuals Have Access to the Same Resources as do the Pros

- Databases
- Screening-Testing platforms
  - I've seen the high-end tools and they're not all that great
- Their speed advantages etc. are illusory
  - If nanosecond trading was so great, why have so many mutual funds and hedge funds been struggling? Where's their alpha?
- Investor relations web sites, 10-ks, etc.

# Individuals Even Have Some Advantages

- Individuals can better focus on smaller stocks
- The S&P 500 is very efficient hard to consistently find winners
- Individuals don't have to explain why they own what they own
  - i.e., companies that reported disappointing earnings
- Individuals are on balance smarter! (Yes, really!!!!!)
  - Every profession has great people, horrible people, and all gradations in between
  - The fact that individual investors have accumulated enough to be individual investors raises an inference that they fit somewhere in upper half
  - Individual investors differ from pros only in that their professions are were in areas other than investing
- Individuals have better experience
  - You learn a lot about evaluating businesses by working in a corporate environment, as entrepreneurs, in professional practices, etc.

## Individuals have one potential disadvantage – Available Time

- By stepping into another profession, one has to put time into learning the tools and techniques
- AAII members have already negotiated this obstacle
  - Especially those attend events like this one

# Q. Do Stock Screening and Analysis Still Play a Role?

A. Yes – Absolutely!

#### Screening

 No matter how good you are at analysis, you can't succeed if you spend all your time looking at stocks that aren't worthy of being looked at

#### Sample Stock Group 1

- How would you have done if you spent all your time in the past year looking at these stocks and choosing the best?
  - Abercrombie & Fitch, Electronic Arts, Hewlett-Packard, Best Buy, Dell, R.R. Donnelley & Sons, Chipotle Mexican Grill

#### Answer

- Badly, even if you are a GREAT analyst.
- They were all dogs.

#### Sample Stock Group 2

- How would you have done had you spent all your time looking at these stocks?
  - PulteGroup, Whirlpool, Seagate Technology, Dean Foods, Time Warner Cable, Weyerhaeuser, Apple, PetSmart

#### Answer

 You'd have done well, even if you are a TERRIBLE analyst. All the stocks performed well

## What clues might have prompted you to look focus on Group 2?

- Maybe some familiarity can have provided some help
  - It didn't take much to distinguish between Apple versus Best Buy
  - But that's no more than an occasional thing
    - What might have cued you into Whirlpool or PetSmart

#### Finding Stocks You'd Never Before Heard Of

- Screening provides opportunities to find smaller stocks, which can be important given the increasing "efficiency" of the large caps
- Sometimes, the best stocks you'll ever own are stocks you never heard of until you saw them on a screen
  - Examples for me: REED, XPO, TISA, GV, CPSS
- Don't count on the Peter Lynch thing other than REED, I couldn't have found any of these in the course of ordinary day-to-day life

#### **Analysis**

- The information era is a great boon
  - 10-Ks, 10-Qs, Earnings Releases, Organized data presentations, Company communications, conference Call replays-transcripts, company presentations, etc.
- The only thing missing are the one-on-one analyst-company conversations
  - But this hits the pros too, since these have become very limited in light of Reg. FD

#### But Be Sensible About all This

- Like the advent of the auto, the information age gives us new ways to make things better, but also, new ways to mess up
- It's important to remember that every number has a reason and a context
  - Sometimes, other numbers will supply analytic context
  - Other times, we must look to qualitative factors
- We must also remember that we're looking at the past, but our investments will be determined by the future
  - Past is relevant since more often than not, change is evolutionary rather than evolutionary
  - But we must always stay alert for changes that can't be signaled by numbers
    - Sentiment indicators can serve as clues that such qualitative signals are out there

Q. Do Back-testing and Optimization Really Work – Or Are They Just Adult Video Games?

A. "Yes" to back-testing; "No" to Optimization; and "Why Not!" to adult video games

#### First Things First . . .

- What's wrong with adult video games?
  - They can be fun, unless you, like me, reached an impossible level on Angry Birds ☺
  - Simulating reality can be very valuable
    - There's pharmaceutical research. Pilots train on simulators; so, too, does the military; so, too, now do first responders and those who work at dangerous facilities such as nuclear power plants
      - On provider of such simulators for the latter labels them as "serious gaming"
- Investors should take care to avoid being the last ones to test and simulate

#### Optimization

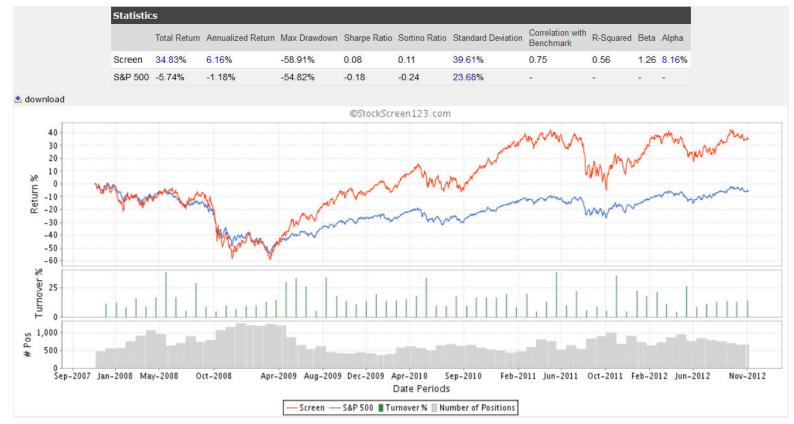
- I don't like this
- It's very good at predicting the past, but the factors change
  - CAPM, APT, etc. and changing Betas
  - Markowitz and covariance pairs
- Over-reliance on mathematics makes it too easy to avoid thinking about analytic issues that must be addressed
- It also makes it hard to do analysis, because the complexity is inhibiting and "heuristics" are frowned upon

#### **Back-Testing**

- This is the greatest thing since sliced bread
  - Especially since it's now so accessible
- Core Usage: Test potential investing strategies
- Test general ideas (even those that aren't expected to be investment strategies)
  - Will you be an inevitable loser with a company with down TTM EPS, estimates falling by 20% or more and a PE above 40 an inevitable loser?
  - Does Beta do what it's supposed to do?
  - Does PEG have to be below 1.00?
  - Do analyst ratings mean anything?
  - Does earnings-surprise matter?
- Today, I don't think one can make statements about how stocks behave without proving what they say is true

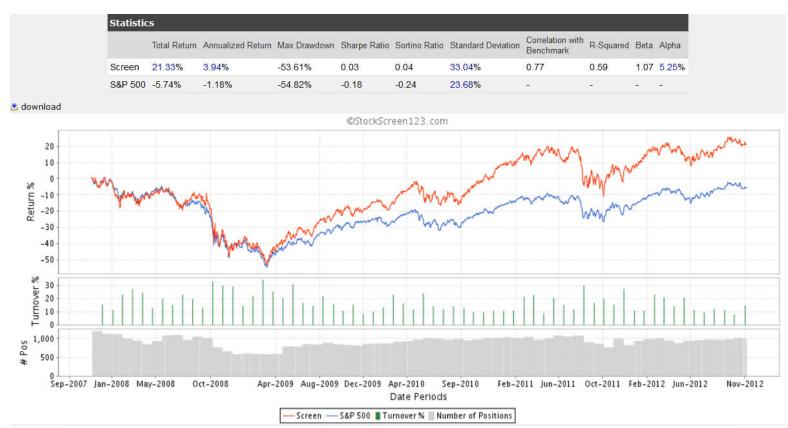
## Theory Testing Example

- Screen: PEGLT <1 (PEG based on projected LT growth rate)</li>
- 5 Yr. Back-test against a Russell 3000 universe with 4-week rebalancing
- Conclusion: Not bad!



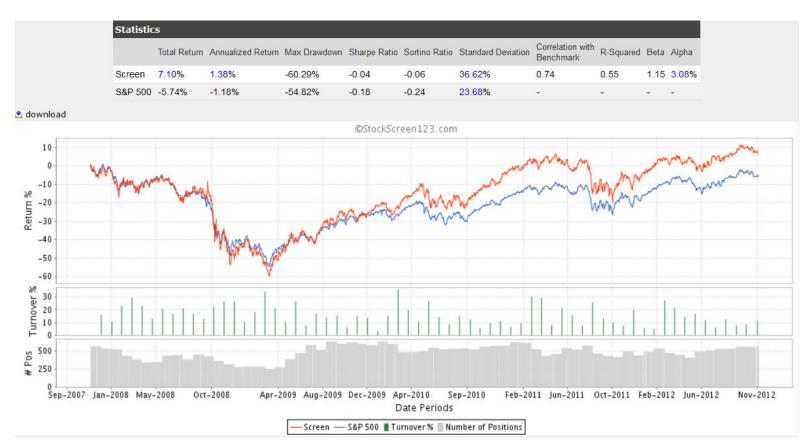
## Theory Test - continued

- What about PEGLT >= 1 and PEGLT < 2?</li>
- It's not as good, but still positive



## Theory Test - continued

- Testing PEGLT > 2
- Still positive, but just marginally so. We've really lost a lot



### Theory Test - Summary

- We learned that PEG, although a creature of folklore rather than normative theory, really is valuable to us
- We learned that stocks with PEG ratios below 1 really are worthy of note
- But we also learned that PEGs up to 2 are also OK, a bit less desirable than PEGs below 1, but if a stock has other merits, a PEG between 1 above 2 ought not turn us off
- We also learned that PEGs above 2, although not appealing, are not automatic disasters; if we see a stock that has a lot to offer, we should not automatically discard it only because of a 2-plus PEG ratio
- Most important, back-testing is the difference between believing something to be the case, versus knowing something to be the case

## But Back-testing Must Be Done Thoughtfully

- Reasonable sample periods biggest challenge!
  - Don't include 1999-2000, or even 2003-05 unless you expect such conditions to be in effect going forward
  - Don't get hung up on 2008 unless you expect another crash like that
- Investable portfolio sizes
  - Don't show you can outperform with a screen that produces 200-300 companies
- Work With Representative Universes
  - Don't assume you can use your strategy to select among large caps just because it tested well with a broader universe that included many micro caps
- Pragmatic holding periods
  - If brokerage commissions inhibit you from trading more than monthly or quarterly, don't test based on daily or weekly re-balancing
- Slippage assumption Be reasonable, not macho

## Goals of Thoughtful Back-testing

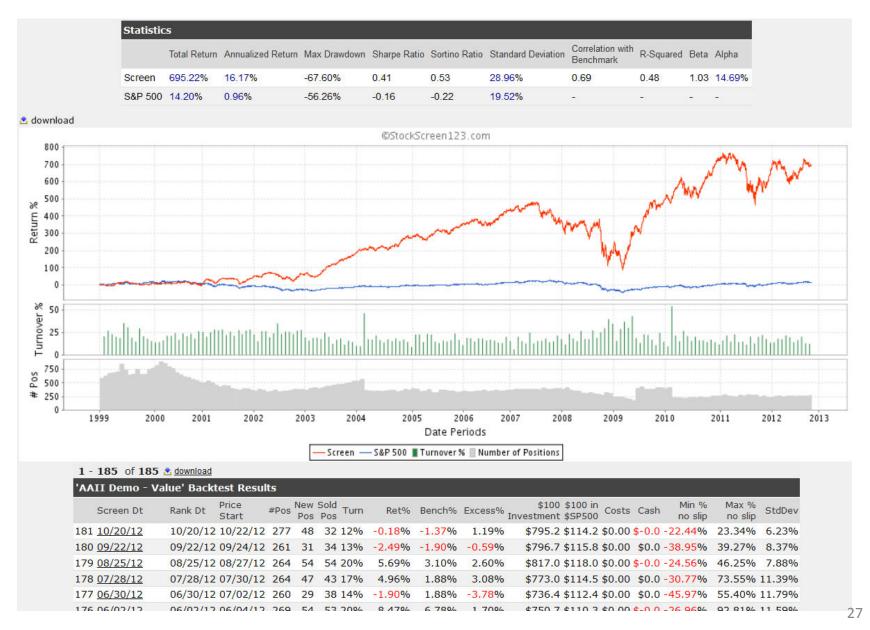
- Can a particular idea or strategy work at all?
- Can it work for all kinds of stocks, or should the field be narrowed?
- Is it possible to narrow a big list down to reasonable size?
- What sort of market conditions can make it work?
- How often should you rebalance?
  - Don't assume more frequent is always better than less frequent; some kinds of ideas need time to pan out
  - My favorite interval four weeks, or monthly

#### Demo Value Screen on StockScreen123

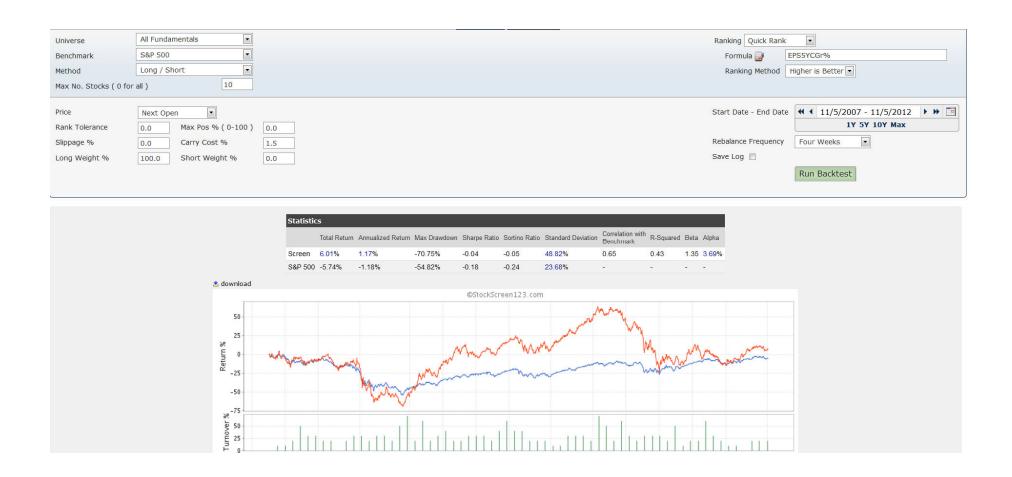
About Notes	Rules Hedge Rules Results	Backtest		
settings reference reference reference				
Universe	All Fundamentals	Ranking Ranking System		
Benchmark	S&P 500	Ranking System Select		
Method	Long	Ranking Method Use Ranking System Default		
Max No. Stocks ( 0 for all )				
Add Wizard Rule	Add Free Form Clear	As Of 11/5/2012 Run Totals Φ		
⊕ 🎉 🗶 🔘 uni	verse(nootc) and close(0)	>=1 and AvgVol(60)>=15000 // Basic Liquidity Rules		
+ 3 X and FRank("PEGLT", #all, #asc, #universe)>=67 // PEG based on forecasted growth rate in best two-thirds				
+ 📑 🗶 🔵 and FRank("OpIncAftDepr(0,ttm)/\$EV", #all, #desc, #universe)>=67 // Op Inc to Enterprise Value in best two thirds				
# And FRank("Pr2BookQ", #all, #asc, #universe) >= 67 // price to book in best two thirds				

About Notes	Rules Hedge Rules Results Backt	st			
settings - reference •					
Universe	All Fundamentals	Ranking Ranking System •			
Benchmark	S&P 500	Ranking System Select			
Method	Long	Ranking Method Use Ranking System Default			
Max No. Stocks ( 0 for all )					
Price	Next Open	Start Date - End Date			
Rank Tolerance	0.0 Max Pos % ( 0-100 ) 0.0	1Y 5Y 10Y Max			
Slippage %	0.0 Carry Cost % 1.5	Rebalance Frequency Four Weeks			
Long Weight %	100.0	Save Log 🗈			
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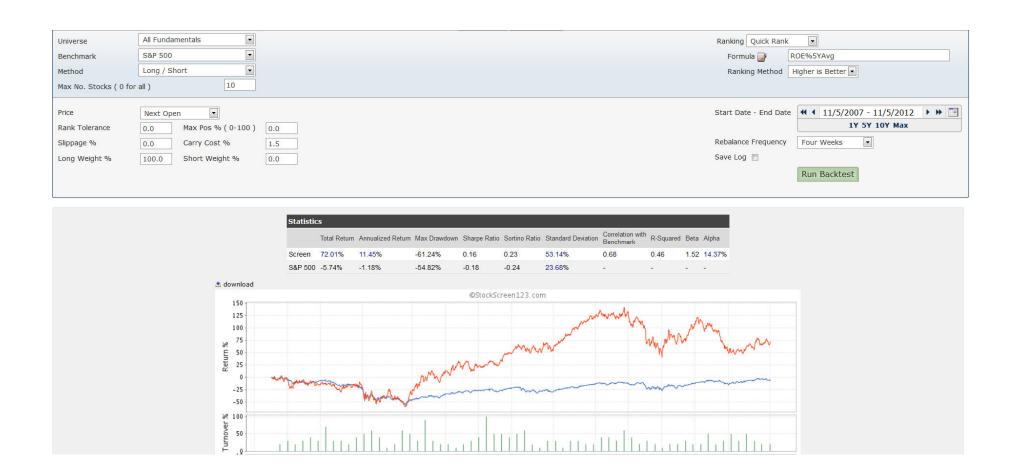
#### **Basic Back-test**



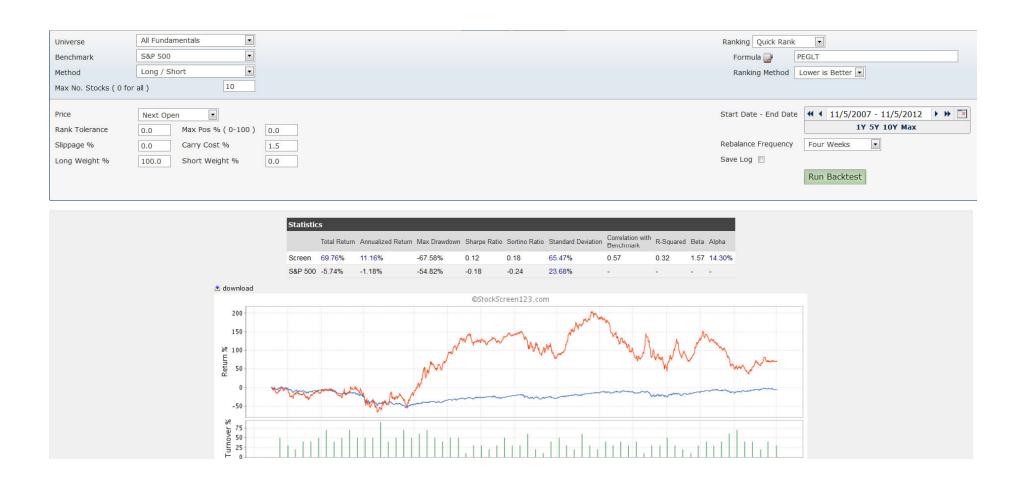
Eliminate early 2000s – not representative of current environment Narrow to realistic # of stocks (10) using, as a "Quick Rank" 5 Yr. EPS Growth Rate Result is not good



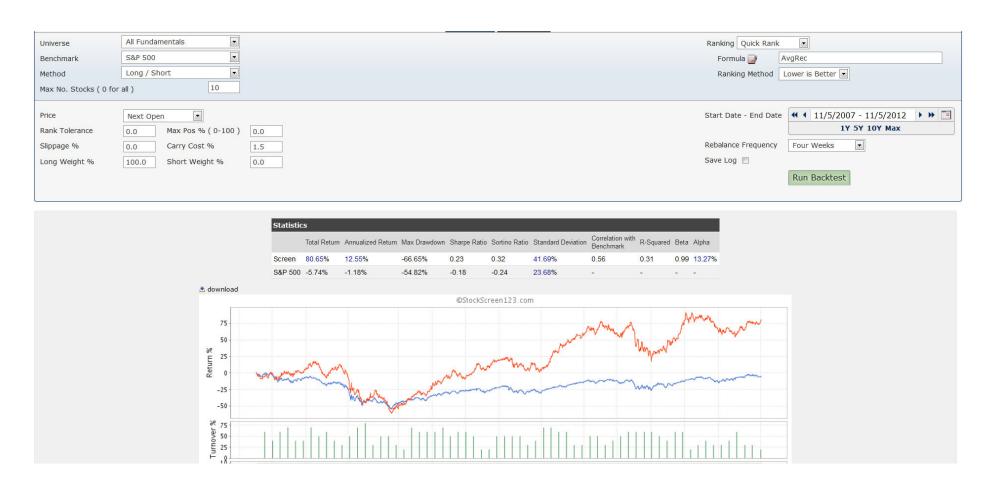
#### Narrow using a sort based on 5-Yr. ROE Result is better overall, but not fully satisfactory



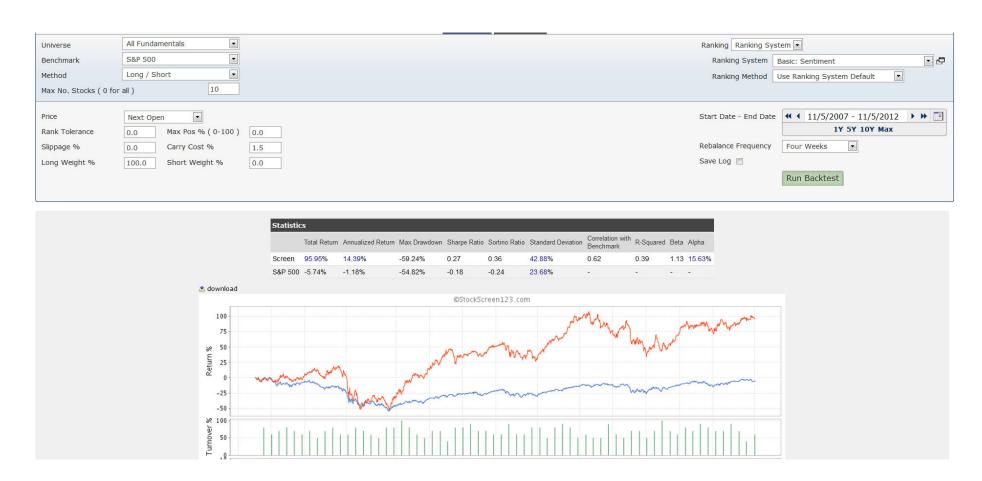
## Narrow using a sort based on PEG (computed using projected LT growth rate) Result leaves much too be desired – value overkill



#### Use Avg. Analyst Rating (1=best, 5=worst) for sort Combine the most theoretically cherished style with one seen as hype Result looks interesting, although still not ideal due to late volatility



#### Sort using a multi-factor Sentiment-based ranking system Imperfect, but the most promising set of results thus far achieved



#### Criteria used in Sentiment Ranking System

About Ranks

Basic: Sentiment
All Ranking Systems

Basic ranking systems are those that focus on a single well-recognized investing style. This one identifies stocks that are most well liked among Wall Street analysts and by investors who follow them.

As investing styles go, this particular approach tends to be most disdained by textbook writers, who tend to focus on the merits of the stocks themselves, rather than surrounding sentiment, which they see as often being irrational or fleeting. That said, Analyst Sentiment can still be an effective real-world strategy since investors who to follow analysts are most likely to be large institutions that put large sums of money to work. Given that stock prices are ultimately based on supply of and demand for shares, it's hard to ignore the attitudes of the largest investors. In other words, on Wall Street in the short term, might can make right. So this ranking system is best used by those who approach investing empirically (what actually works whether or not it ought to work) rather than normatively (what should work whether or not it's actually working right now).

The factors used in this ranking system are

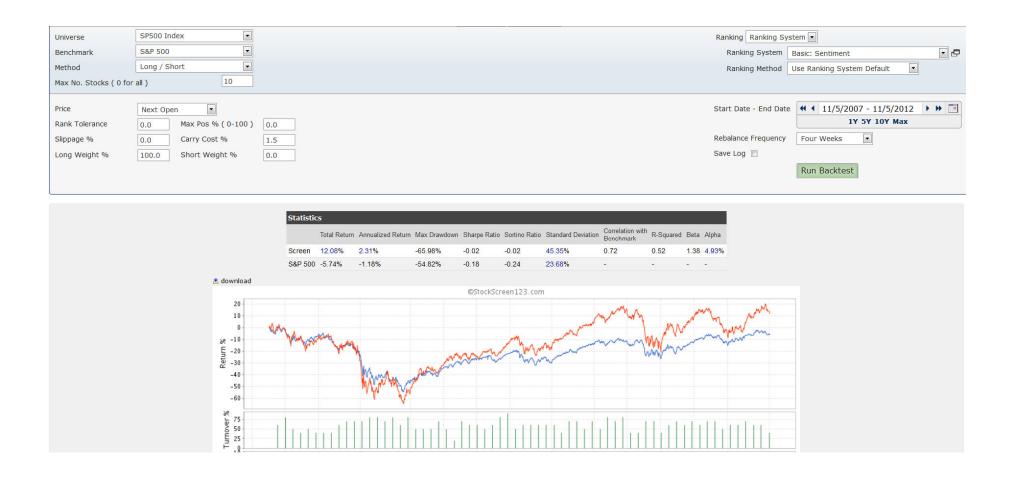
- 1. Estimate Revision
- 2. Earnings Surprise
- 3. Analyst Recommendations
- 4. Upgraded Analyst Recommendations

Methodology Top Results

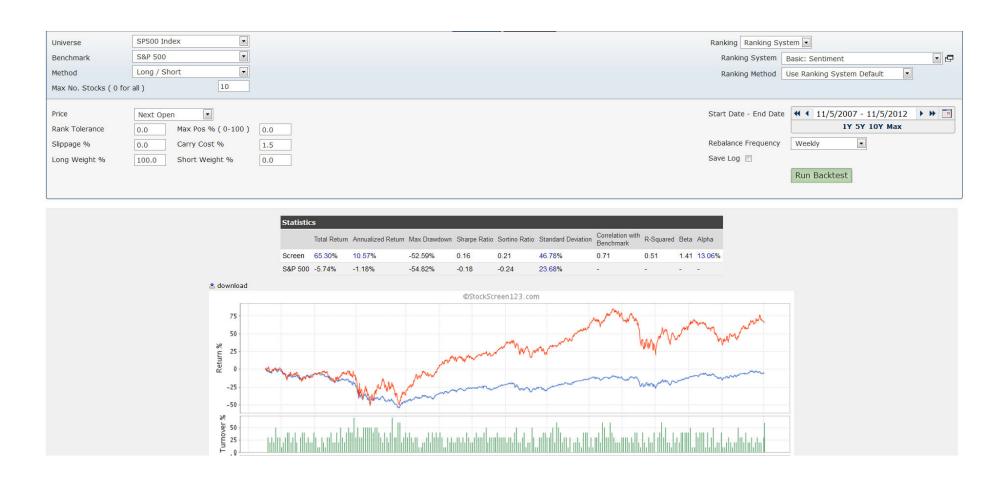
Factors used in the Sentiment ranking system:

- 1. Estimate Revision 50% of total
  - 1. 4-week revision in current-quarter consensus EPS estimate (33.3% of this category)
  - 2. Price-to-Book (15% of this category)
  - 3. 4-week revision in current-year consensus EPS estimate (33.3% of this category)
  - 4. Variability of consensus current-quarter EPS estimate, lower is better (33.33% of this category)
- 2. Earnings Surprise 30% of total
  - 1. EPS surprise in the most recent quarter (65% of this category)
  - 2. EPS surprise two quarters ago (35% of this category)
- 3. Analyst Recommendations 20% of total
  - 1. Average Recommendation Score, the more bullish the better (25% of this category)
  - 2. 4-week change in Average Recommendation Score, the more bullish the better (75% of this category)

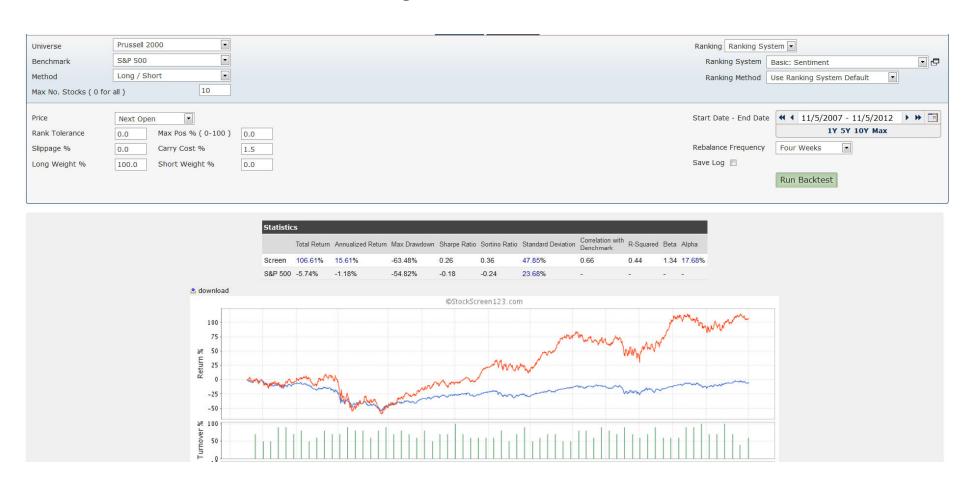
## But don't assume the strategy can work for all kinds of Universes It's loses a lot when confined to an S&P 500 universe



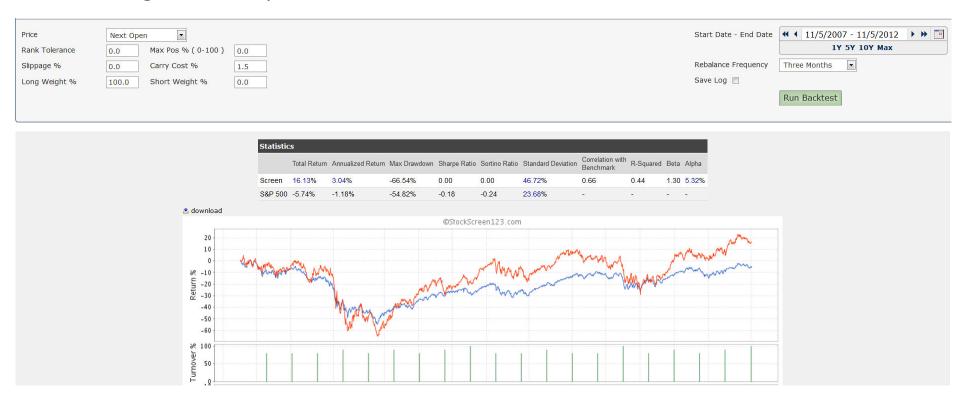
## But you can work with S&P 500 stocks if your brokerage commission terms allow you to re-balance your model weekly instead of monthly



## However, sticking with a smaller-cap Russell 2000 universe can work nicely even with four-week rebalancing



By the way, forget about "forever" holding periods (even Buffett doesn't really do that). When someone advocates long-term holding periods, challenge them to prove his/her case.



Q. How can these techniques and tools be applied to stocks, ETFs, and mutual funds in a reasonable amount of time – without requiring a PhD?

A. Just get a good screening platform and go for it!

#### The PhD stuff – Don't worry about it!

- I've seen no indication the fancy mathematical things actually work, and if anything, they provide a false sense of security – case in point, 2008
  - PhD approaches require 100% systemic models
  - They only work if investing is all science and no art
    - Investing can never be that way because when all is said and done, success or failure depends on the un-knowable future
- Even the quants, or at least the good ones, are starting to come to grips with this
  - Black-Litterman, CCAPM, Regime-switching, etc.

## ETFs – It's just a matter of technical analysis at present

- At some point platforms may provide the sort of macroeconomic data to allow for the building of top-down models
  - But for now, we don't have that
- Use technical analysis to spotlight the broad areas in which you should be, assuming you are willing to go into any area
  - Example: The stockscreen123 ETF Rotation Conservative model
- The key is to make yourself comfortable with the legitimacy of technical analysis

#### **Stocks**

- Work with the well-known core principles, the classic stuff
- But do so with an open mind recognizing . . .
  - The market tends to change over time
  - The market doesn't always like the kinds of stocks gurus say it should like
    - Be sensitive to the difference between Normative versus Empirical approaches
      - Normative: This is the way it should be.
      - Empirical: Who cares about what should be! This is how it really is.

## The Core Principals

- There's nothing new or exotic here
- But it can be helpful to organize them into broad categories
  - The Numbers
    - Value
    - Growth
    - Quality
    - Sentiment
  - The Story
- Any strategy, screen-based or otherwise, can specialize in one category, or draw from multiple categories

## Value – I do it right!

- This is often the first category to which novices are exposed; like the way opera buffs first encounter Carmen or art aficionados start with impressionism
- It's also the starting point for investment theory efforts to determine a correct stock price
- The idea of value is to look for some reasonable relationship between the price of a stock and some key aspect of the company
  - P/E, PEG, Price/Sales, Price/Book, Price/Cash flow, Dividend Yield, Enterprise Value/EBITDA, etc.
  - Usually, all else being equal, lower is better (except for yield)

## Growth – Go, go, go!

- This is often seen as the province of hype but actually, it's the bedrock of stock analysis
- Absent growth, there is no reason to ever own stocks because their yields, if they have yields, are typically below those of bonds
  - Dividend growth is the key, but that represents cash streams we actually get
  - (Free) Cash flow comes next because dividends come from cash flow -and if there are no dividends, earnings suggest potential future dividends -- but cash flow can be erratic from year to year, so . . .
  - Earnings come next because this is cash flow adjusted, per accounting rules, to spread often erratic one-time expenditures over the lifetime of the asset purchased or built
  - EBIT, EBITDA or Operating Profit are noteworthy, but don't fall into the temptation to ignore interest expense
  - Sales are at the root of the tree, because without Sales, we have nothing else

## Quality - Snob Appeal

- This is the stuff made famous by those who write about Warren Buffett
  - Return on Capital and its components (margin and turnover
    - If you can't return more than Treasuries, why not liquidate and invest in Treasuries?
  - Financial Strength (debt leverage and liquidity)
    - If you can't pay your obligations, you can't stay in business
- We're seeking companies that are good at what they do and subject to reasonable business risk
  - The idea is that better quality companies are better able to deliver the growth we desire

#### Sentiment – Rotten Tomatoes Reviews

- Rather than focus on what we think of the stock, we'll piggy-back atop what other investors/traders think of the stock
  - Technical Analysis use of price and/or volume information to discern the collective views of "the market"
    - Hopefully, someone somewhere really looked at the company and came up with a substantive opinion
  - Other indicators Estimate revision, Analyst Ratings,
     Short Interest, Institutional activity, Insider activity

### The Story – Hello Rodney Dangerfield!

- The story consists of all the relevant qualitative factors
- Once upon a time, it was premier, but a line of thinkers from Graham & Dodd to Harry Markowitz and William Sharpe et. al. to the advent of the internet and databases push many of us to disrespect the story as being something for those who don't know how to do quantitative analysis
- Respect the Story!
  - Numbers are isolated items and necessarily deal with the past
  - You need the story to put numbers into context and to assess the future

#### Blending the Story and the Numbers

- Generally speaking the numbers and the story need one another
- But if you know what you're doing REALLY! you can get by with just one
  - Numbers alone
    - Bad news: past performance doesn't assure future outcomes
    - Good news: Change is usually evolutionary rather than revolutionary, so the past is more useful than the lawyers acknowledge
    - You can simply buy the list based on a properly diversified and well-tested strategy
  - Story alone
    - Sometimes, as with startup companies or emerging businesses, you really and sincerely don't have good relevant numbers
    - Just make sure you know what you're doing here; it's easy to get hurt badly if you're careless

#### Being Practical – Strategy Formation

- Don't get too obsessed about all this
  - P/E vs. PEG vs. P/Sales vs. . . . .
  - Sales Growth vs. EPS Growth vs. . . .
  - Return on assets vs. Return on Equity vs. . . .
  - Ommmmm . . . . . Just formulate a strategy and relax. There is no single correct formulation. Each kind of strategy has many variations that work well
- Don't be a snob
  - There's validity to all kinds of strategies. Pick what works for you and don't go around arguing with those who pick something different
- Generalist or Specialist either can work
  - Specialization means excellent companies that may or may not stink in other areas
  - Generalists can accommodate companies that my be excellent in nothing but pretty decent in several things

## Being Practical - Value

- Don't be so hip as to dismiss value as old fashioned; even in this day and age, the market still tends to appreciate it more often than not
- A metric that looks too good to be true probably is too good to be true (i.e., the stock is cheap because the company is a dog or about to go into a bad period, or a dividend may soon be cut)
- Be careful about historic P/Es (most databases INCLUDE unusual items that can badly distort the ratios)
- PEG is nice, but it's folklore, not normative theory; below 1 is great, but you can usually be OK up to about 2
- Be mindful about price/sales since sales can be distorted by acquisitions or divestitures
- Surplus cash isn't essential, but the market really does seem to like it!
- Use a variety of metrics, to diversify against unusual items impacting specific numbers
- Don't be afraid to pay up for really good companies; just like you'd pay more at a 5-star restaurant than you would at Applebee's

## Being Practical - Growth

- Run, don't walk, away from extremely high growth rates because the numbers are most likely influenced by unusual factors that won't persist
- Be ESPECIALLY sensitive to the presence of unusual items in EPS that can badly distort growth rates; look, too, at growth in other measures
- It's hard to specialize in growth since the market nowadays has surprisingly little respect for historical track records (dividend growth being the main exception)
- Growth nowadays works best when used in conjunction with other strategies, especially Value or Sentiment (e.g. estimate revision)

## Being Practical - Quality

- Mr. Market, usually more sensible than many realize, has got a screw loose when it comes to Return on Capital (ROC)
  - Although ROC is the penultimate quality metric, Mr. Market has often ignored it, preferring instead to sometimes focus on margin and once in a blue moon on inventory or receivables turnover
- Financial strength is often appreciated by the market, but . .
- You'd be amazed at how often the market will not only ignore "good" companies but aggressively favor firms with very bad metrics
- Bottom line: Quality is a great strategy to read about (i.e. in guru books) but in terms of investing, it may be easier to stay atop a mechanical bull in a bar

## Being Practical - Sentiment

- This is a feel-good category; it's nice to know others also like the stocks you own (you will, after all, eventually want to find parties motivated to buy your positions)
- Oddly, though a lot of numerical indicators are hit or miss (short interest or analyst ratings can go either way; institutional data is too stale to be reliable; earnings surprise, unaided by other data points, can be weak
- Some decent indicators:
  - Estimate revision: this still has some juice
  - Price Momentum: although it's often better to enter a strong stock after a mini-correction
  - Guidance changes remain potent numerically, these may be caught by gap up/down or similar technical strategies
- Most important, be objective; if you find something that works, use it
  - Don't get caught up in snobbery about the mob, the herd, etc.
  - Given that stock prices are set by supply and demand, might makes right, so it's important to know what the herd thinks

## Being Practical – The Story

- Download and read 10-K business descriptions
  - They look scary and ugly and legalistic at first glance, but often are much more readable and informative than many realize
- Look at the investor-relations areas of company web sites
  - If they don't exist or are unusually superficial Take the hint!
- Look at company PowerPoint presentations (often in the investor relations web site)
  - This is pretty much what pre-Reg. FD analysts came away with after one-one interviews
- Look at the CEO comments in earnings releases and conference call transcripts; Mr. Market hangs on every word (It's OK to sleep through CFO numbers recitations; just look at the statements and tables on your own)

#### Being Practical – The Whole Package

- As you may have guessed from the Practical slides, I tend to favor a generalist approach (everything is good for something, but most approaches are unable nowadays to carry the weight on their own) with noticeable doses of value and sentiment
- I tend to prefer broad screens and use of a "Quick Sort" or Ranking System to narrow down to a manageable list size
  - I typically back-test the screen and sort criteria together
- I tend to emphasize smaller stocks
  - These are the ones where it is most feasible for screen-based strategies to gain and edge and the ones where developing the story is most feasible
    - Large caps tend to be more efficient, meaning it's harder to gain an edge via the numbers
    - Large cap stories tend to be muddled by corporate entities that have become so big and companies, even top insiders can barely stay on top of what's going on

Q. How do these interact with asset allocation and life cycle investment strategies?

A. Beware of stereotypes

## Stereotypes

- Life-cycle investing isn't my specialty, but . . .
- I know enough to be wary of stereotypes that seem to want to push older, supposedly more conservative investors into fixed income
  - Sure the numbers look great, but that's due to epoch nonduplicable plunges in interest rates
  - If somebody suggests bonds at all, regardless of your age, make sure they present a credible rising interest rate strategy involving such elements as
    - TIPS
    - High Duration bonds
    - Dividend growth stocks
  - Watch out for credit risk in state/municipal bonds

# Thank You and Happy 2013!

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