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# Can Critical Thinking Subvert Behavioral Finance?

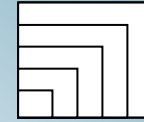
*Critical Thinking Club, November 2018*

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Not responsible for anything you choose to  
do because of what you learn today.



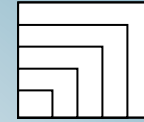
## *Where we are going*

### **1. Behavioral finance**

- a. Behavioral finance deceptions
- b. Experiment with fallen stocks

### **2. Illustrations of investing architecture or strategy**

- a. Strategy vs operations
- b. Monte Carlo
- c. Allocation dimensions
- d. Portfolios
  - 1) Monitoring with charts of performance comparisons
  - 2) Resources for choosing portfolio stocks
- e. Zoom lens and view from multiple perspectives
- f. Buying and Selling

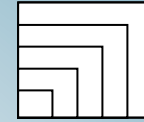


# Behavioral Finance Pitfalls

1. **Anchoring Bias:** What we paid for it is irrelevant.
2. **Blind Spot Bias:** The way we have always done things seems right.
3. **Confirmation Bias:** We read what fits our beliefs and accept facts that confirm our beliefs while avoiding or rejecting data that disconfirms.
4. **Familiarity Bias:** We prefer the stock of companies where we worked, or we think we understand or know well even when they might not be the best investments or the best for us. The insider is less aware of external threats and whether a stock is overvalued.
5. **Fear of Loss:** Often emotional rather than rational. May be an irrational judgment to sit in cash, even when one could weather a 4-year correction without having to sell a fallen stock.

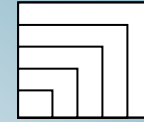
## Behavioral Finance Pitfalls (2)

6. **Greed:** I want more and deserve more. We all have a narcissistic belief that we are special. We become emotionally attached to a rising stock.
7. **Hindsight:** We look at a strong momentum chart and think it will continue.
8. **Mental Accounting:** Different accounts have different meanings or rules which may not be rational. Her money and his money when it is all theirs together. Inherited money. Money gained from speculation versus from earnings.
9. **Outcome Bias:** We often confuse good or bad outcomes with having made good or bad decisions. Often the process or decision was right, given the odds, but the outcome was negative. Or the reverse.
10. **Framing Bias:** Respected authorities serve as models for our goals and prejudices, framing investments as desirable. Everyone is on the bandwagon. What we paid for the stock frames the current price in our mind.



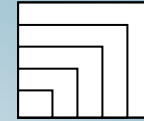
# Behavioral Finance

- Do you think of others?
- How can we avoid the pitfalls?
- How can we gain from others' foibles?
- Whatever you believe about investing, there is likely some opposing common wisdom. It's the nature of markets.
- Momentum or Reversion to the Mean?  
It's all about reversals.  
Adage or data?

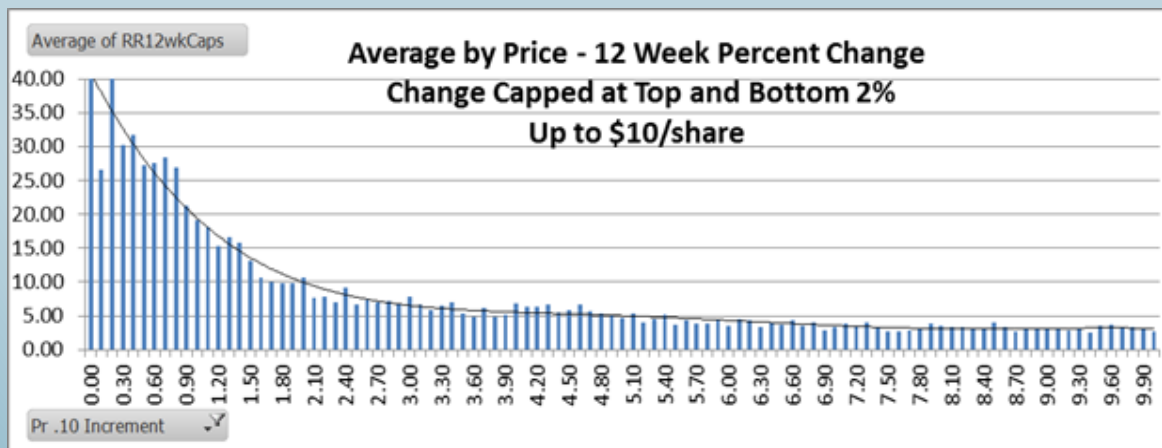
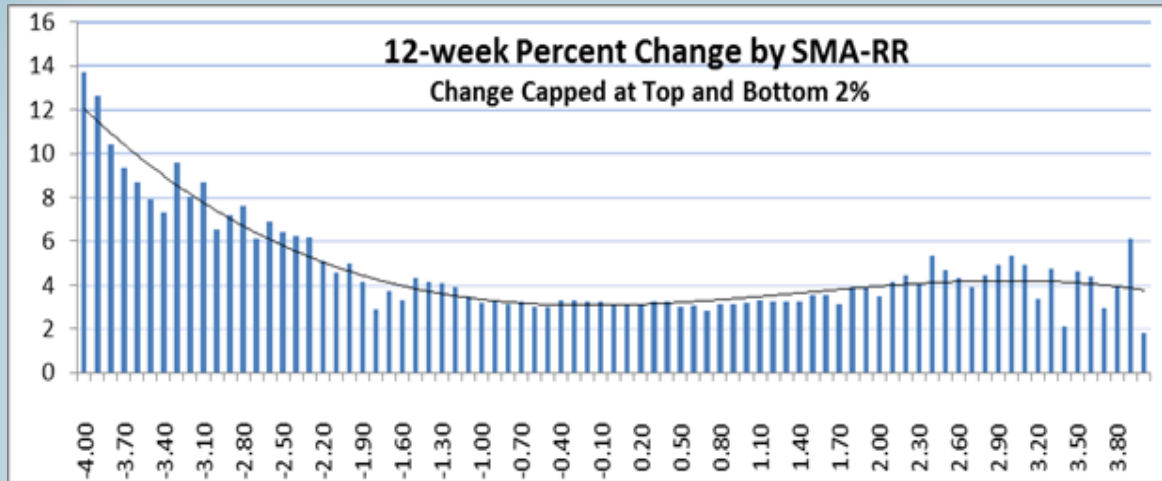


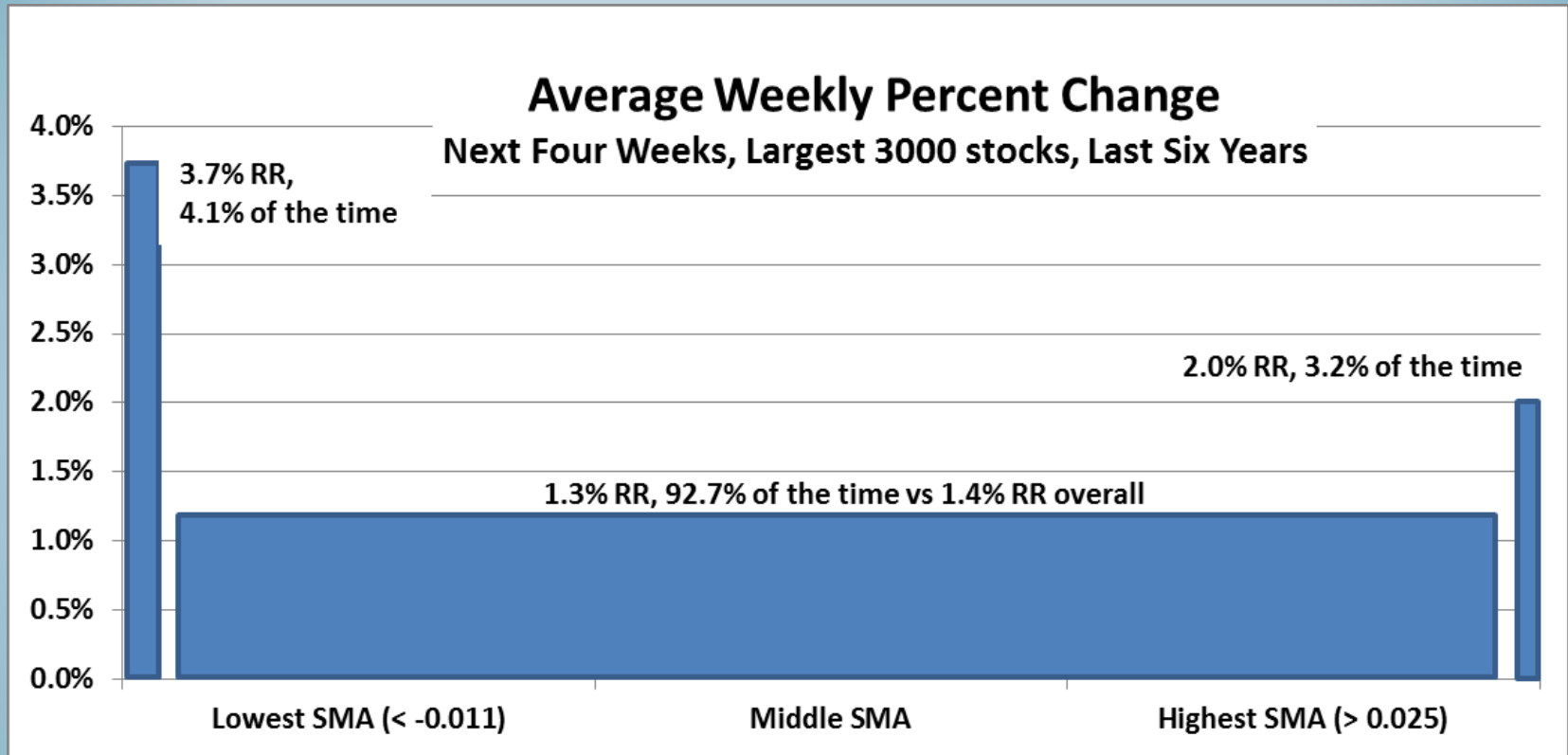
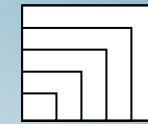
# Possible Protections

- Make decisions with numbers having statistical validity.
  - VectorVest or TC 2000 encourage using quantitative criteria based only on intuition.
- Come back to it later.
  - Most decisions are made in less than a second. Everything thereafter is justification.
- Have someone else review it.
  - Why are we so secretive about money?
- Look from multiple perspectives or dimensions.
  - Pivot tables
- Review performance results against criteria.
  - If one stock goes up or down, what valid statistical conclusions can you draw?
  - If you buy an ETF with 500 stocks, will you measurably beat (or trail) the market?
- Separate time series and ensemble probabilities.
- Use data and be cautious agreeing with authorities.
  - The Big Fat Surprise by Nina Teicholz
- In Jung typology, develop thinking over feeling.



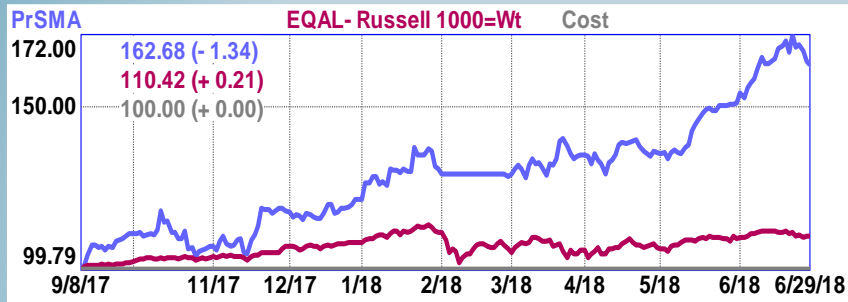
# Momentum or Reversion to the Mean?



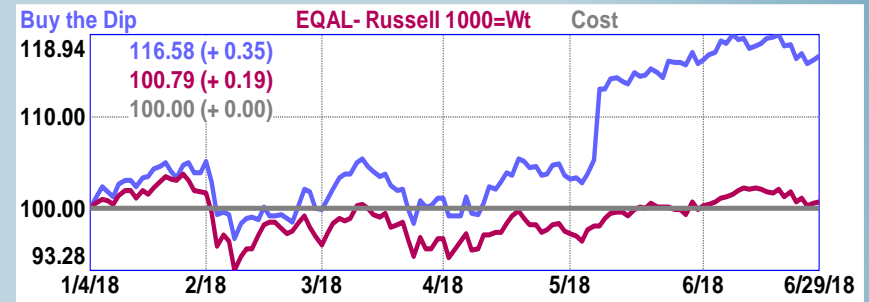




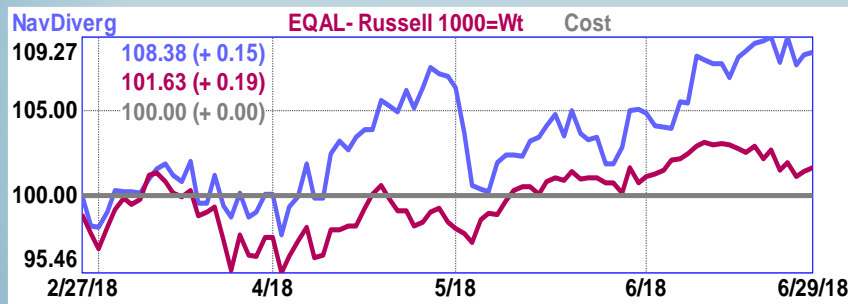
# Story when this presentation submitted



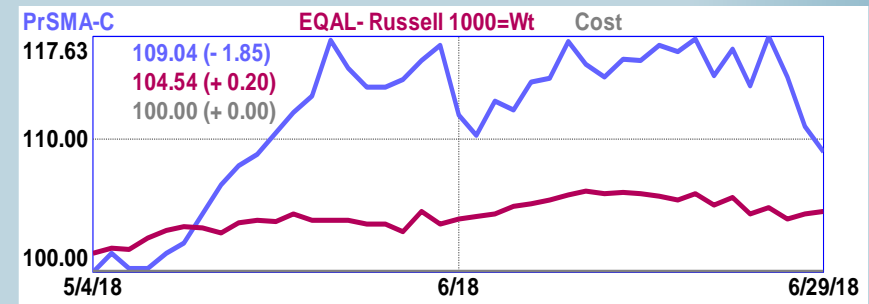
Begun 9/8/17. 62.7% to 10.4%



Begun 1/4/18. 16.6% to 0.8%

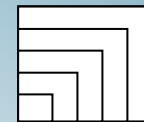


Begun 2/27/18. 8.4% to 1.6%

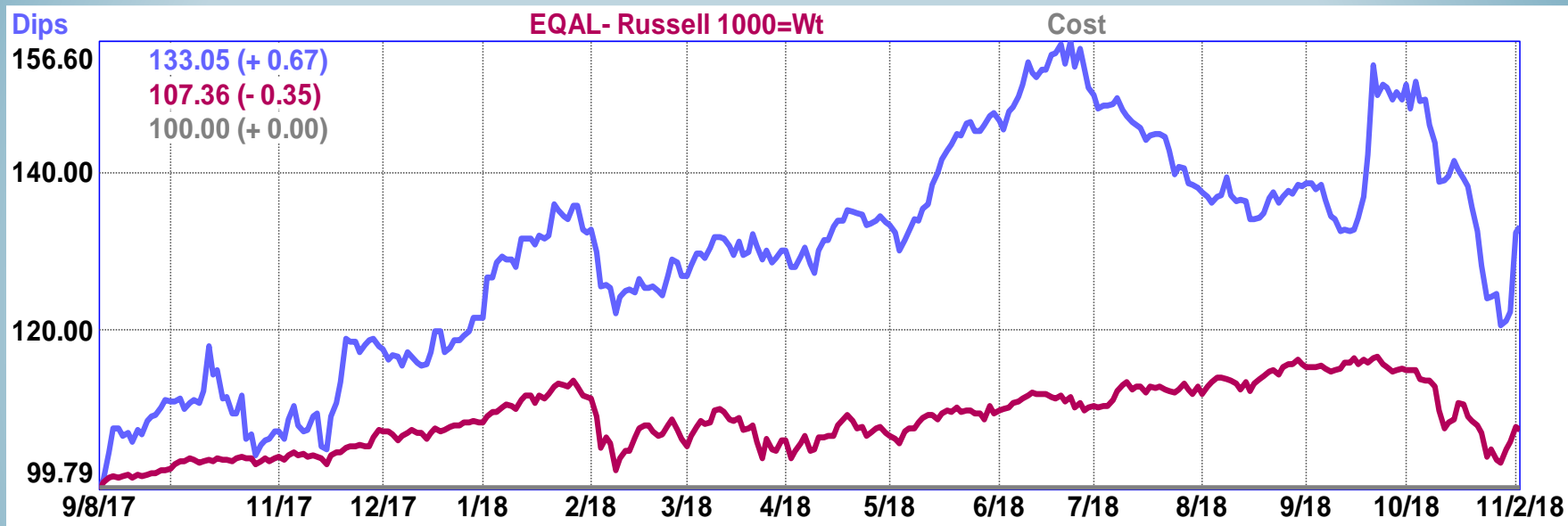


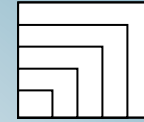
Begun 5/4/18. 7.9% to 4.5%

ROI to 6/30/18: 47.5% change, annualized 62%. About 60 positions.



# Story to date



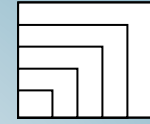


## Constraints and Conclusions

- Need a lot of positions; trading costs.
- Limited liquidity.
- Need to limit the allocation.
- We hate to see losers.
- Need good and diligent technical analysis.
- Trend waves sweep portions of the market.
- The Motif Buying the Dips has been discontinued.

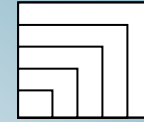
## With that turn of events,

- It is always good to go back to one's overall architecture.
- Most of us are inordinately proud of the framework we use.
- The most important variables for being an effective investor are inside us rather than what we need to know from out there.
  - Witness that the average mutual fund has double the returns as the average holder of the same funds.
  - Need introspective analysis.
  - Behavioral finance does its thing on all of us.



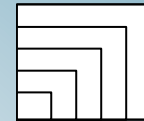
# Summary

- Our strategy is only as good as our diligence (systematic investing), and
- Our tools for execution (tactics).

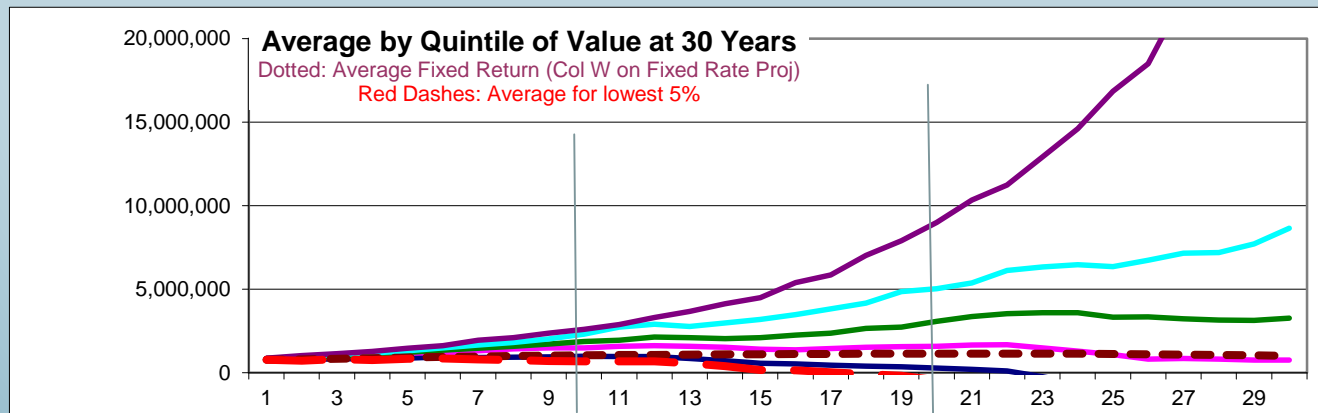
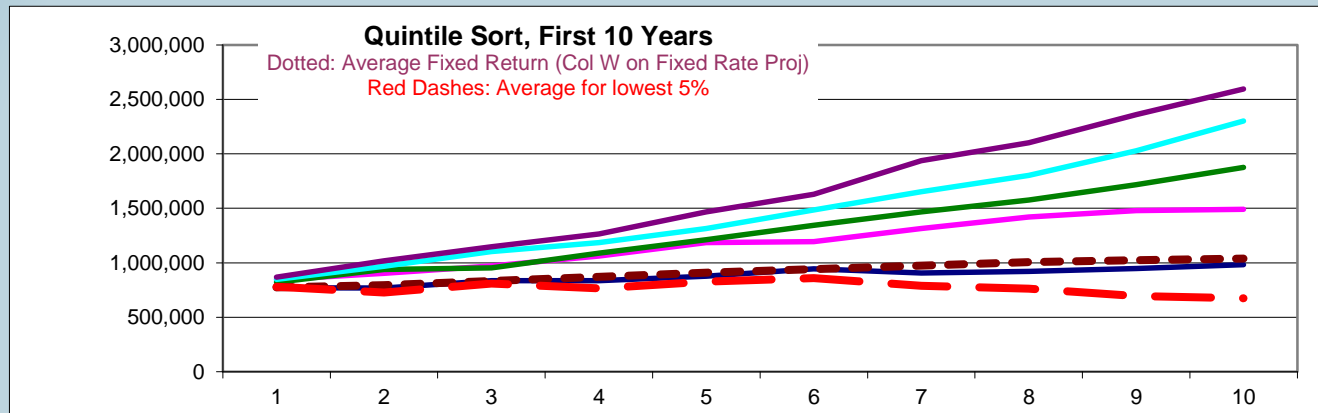


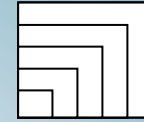
# Tools for Critical Thinking when Investing

1. Monte Carlo
2. Pivot tables
3. Portfolio Manager



## Investing begins with my situation, my goals, my parameters, And realistic projections forward. (Monte Carlo)





# Primary Allocation Dimensions

## **A. Goals**

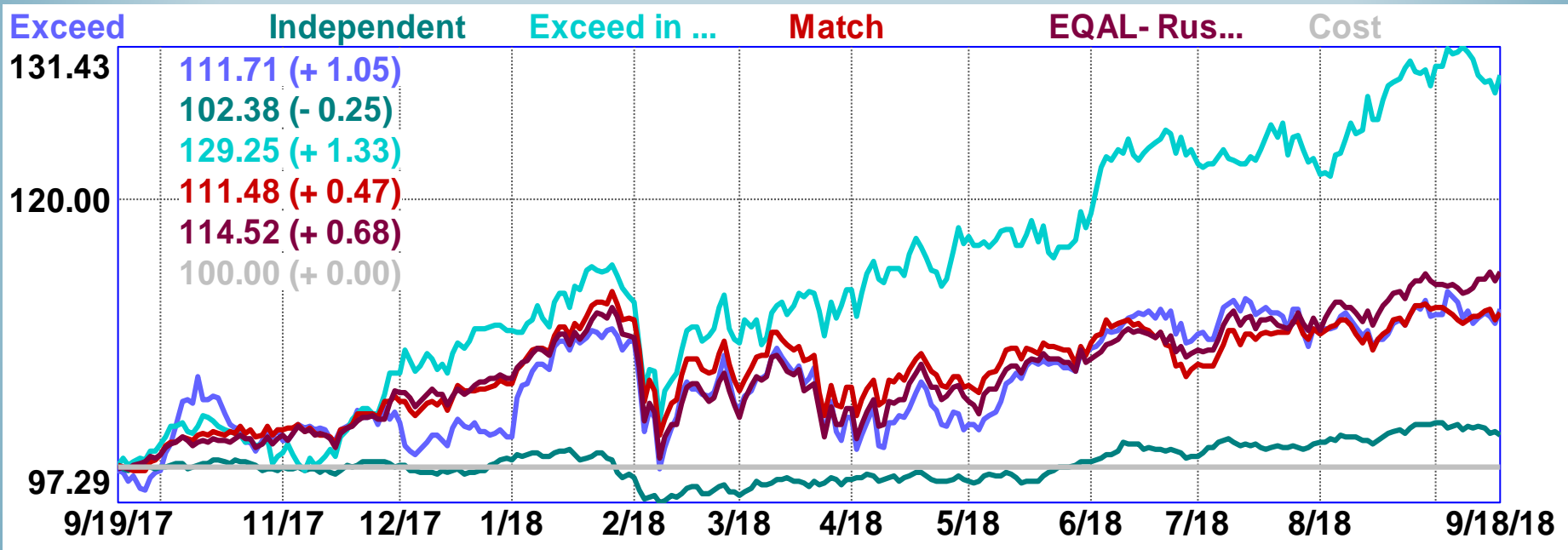
1. Beat the market
2. Beat down markets
3. Match the market
4. Independent of the market

## **B. Methodology**

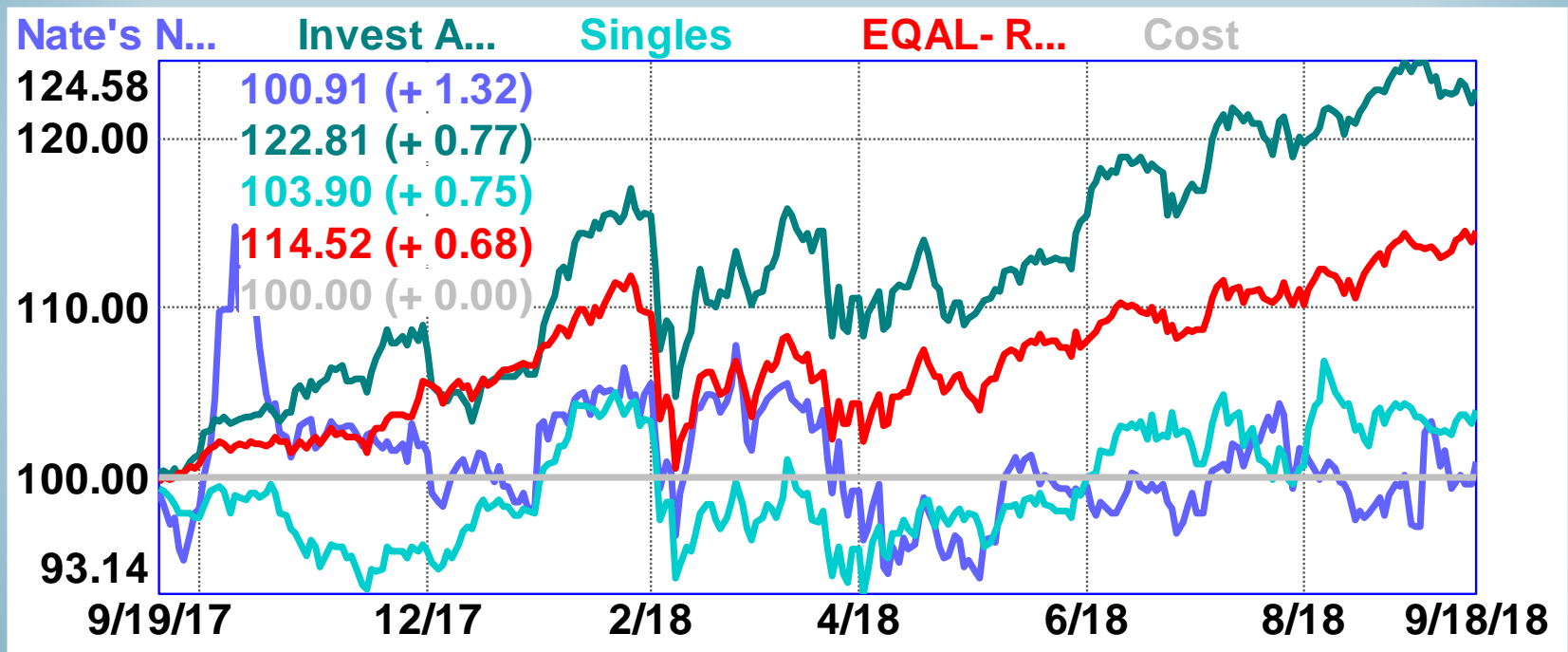
1. Rationale, story, qualitative or fundamentals
2. Tested Source
3. Quantitative



# By Goal



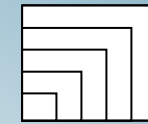
# Exceed the Market



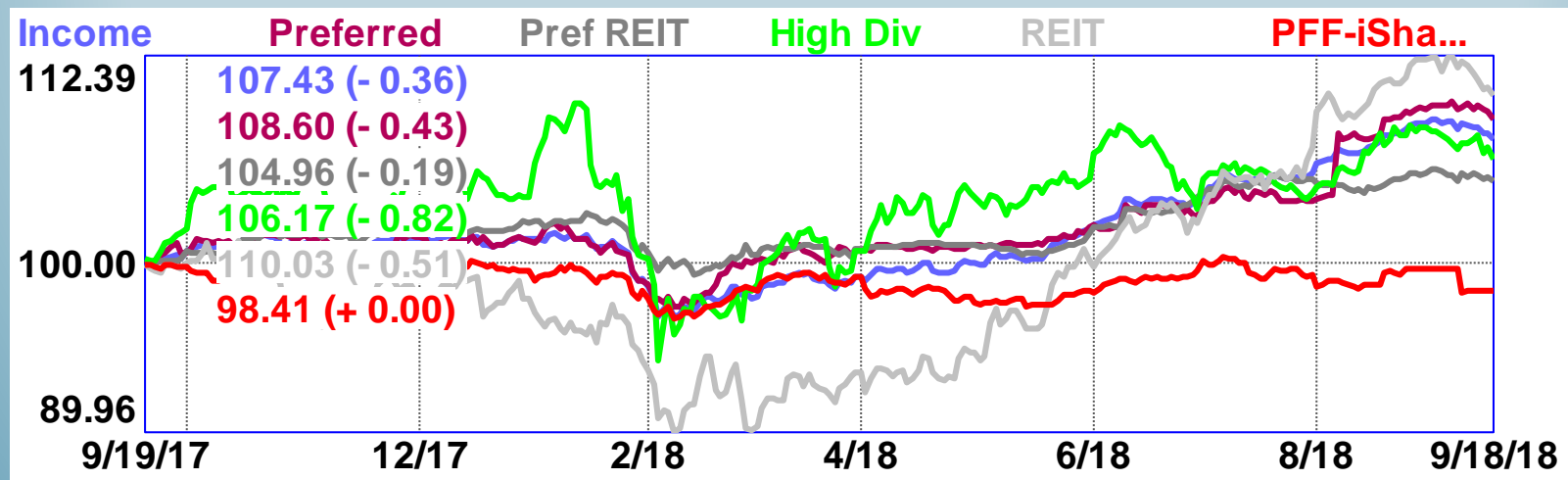
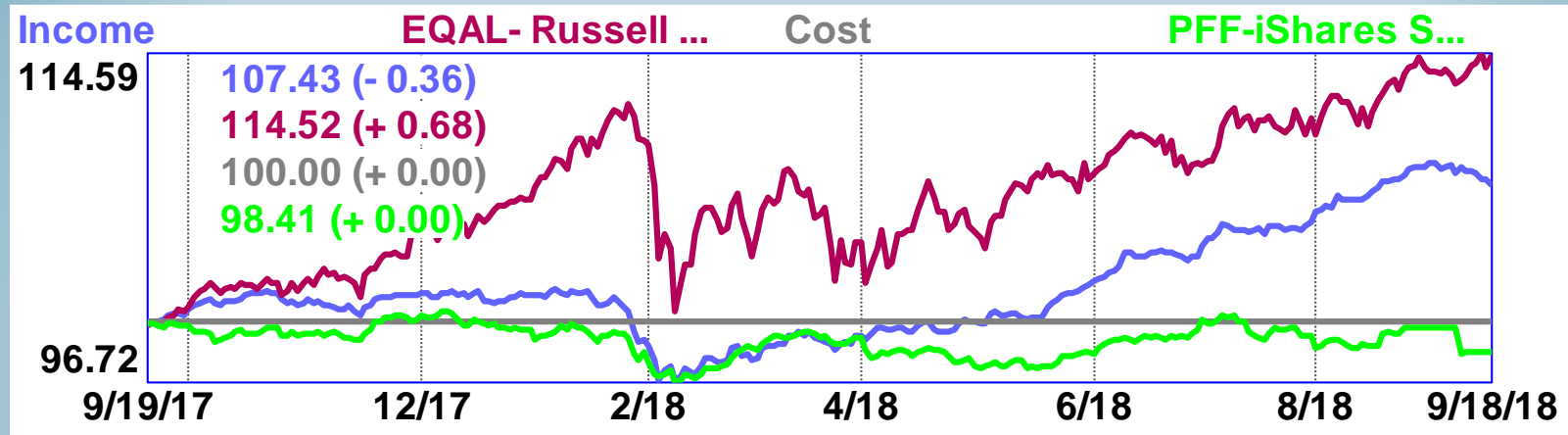
When running the Defense screen,  
the number of stocks selected correlates with  
market performance over the next twelve months.

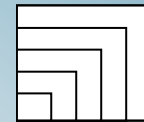
Screen Count	Months Count	% Time	Avg (%)	StDev	SD/Avg COV	1yr Neg	< -7%	
						As % of count		
0	12	8%	0.6	10.6	17.7	42%	33%	Returns of market
1-3	21	15%	-2.3	18.0	-7.9	57%	52%	Out
4-7	19	13%	11.3	12.7	1.1	21%	5%	Cautious
8-14	28	20%	18.9	19.1	1.0	21%	0%	In
15-29	27	19%	24.7	11.7	0.5	0%	0%	Allocate more
30-92	36	25%	27.0	10.6	0.4	0%	0%	Allocate more

The correlation between count and returns was .37, which gives a  $t$  value of 4.78 and  $p$  or probability of happening by chance .00000435 of the time.



# Mkt Independent - Income

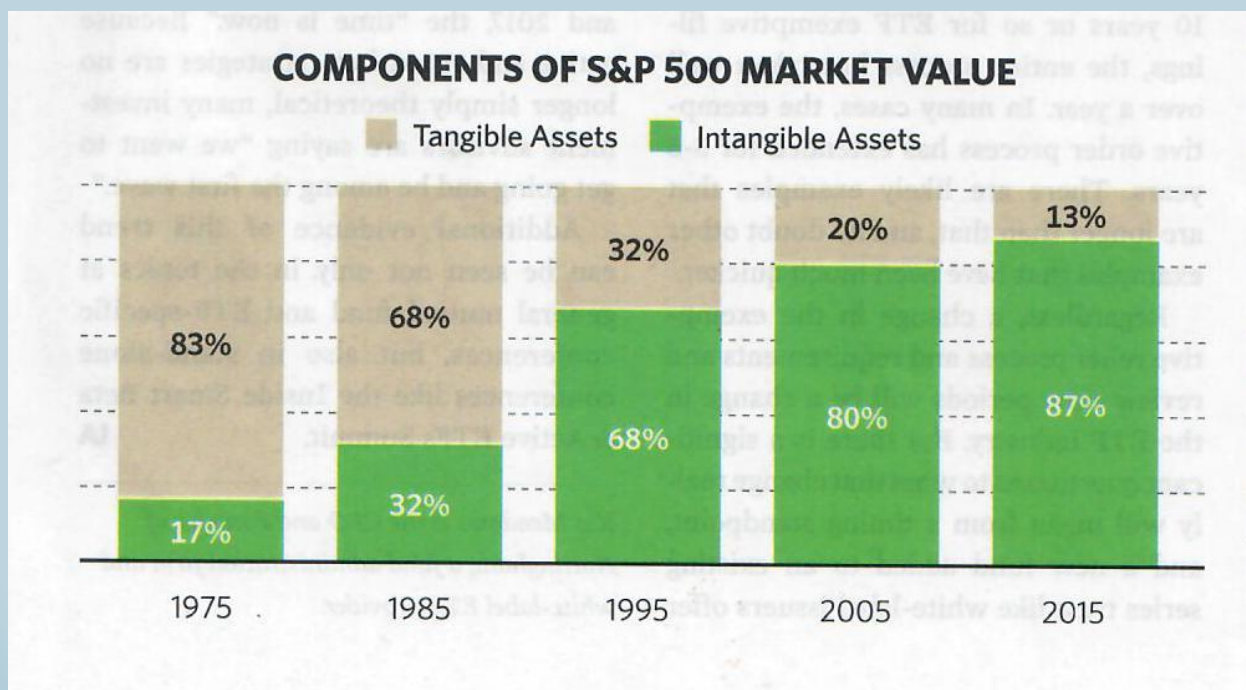


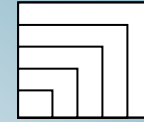


## Valuations have come to be based on intangibles.

How does that affect buying based on fundamentals?

Does it increase vulnerability to company news events?





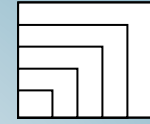
## Secondary Allocation Dimensions

- C. Account and tax status of accounts
- D. Style
  - 1. Large, mid, small and micro cap
  - 2. Value and growth
  - 3. Two by two chart
- E. Domestic and foreign
- F. Sector and industry
- G. Short-term and long-term
- H. Under water, new highs, going nowhere, etc.
- I. Others...

Most investors run these dimensions through their head, but very few are rigorously systematic — meaning maintain the numbers — to carry things out in order to make and execute valid conclusions.

# Excel Pivot Tables

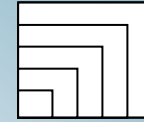
- An essential tool for balancing investments and doing allocation.
- Analyze from multiple perspectives.
- Investing is not just about buying good securities, but those that fit for you.



# Buying and Selling

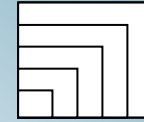
- I buy a portfolio at a time, or to flush out a portfolio.
- I usually sell individually when the stock has broken technical support. (TC 2000)





# Conclusion

- “We have met the enemy and it is us.”
- We put a lot of time and energy into analyzing markets and securities.
- It is equally or more important to have tools for adequate management.
  1. A portfolio tool to calculate returns and compare securities, markets and portfolios.
  2. Pivot tables to balance investments and zoom between detail and big picture.



# Piotroski F-Score Criteria

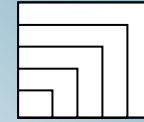
## Static

1. Return on assets +
2. Cash from operations +
3. Cash from operations > income after taxes

## Dynamic (Year over year)

1. Return on assets ratio up
2. Long-term debt to assets ratio down
3. Current ratio up
4. Shares outstanding equal or down
5. Gross margin up
6. Asset turnover up

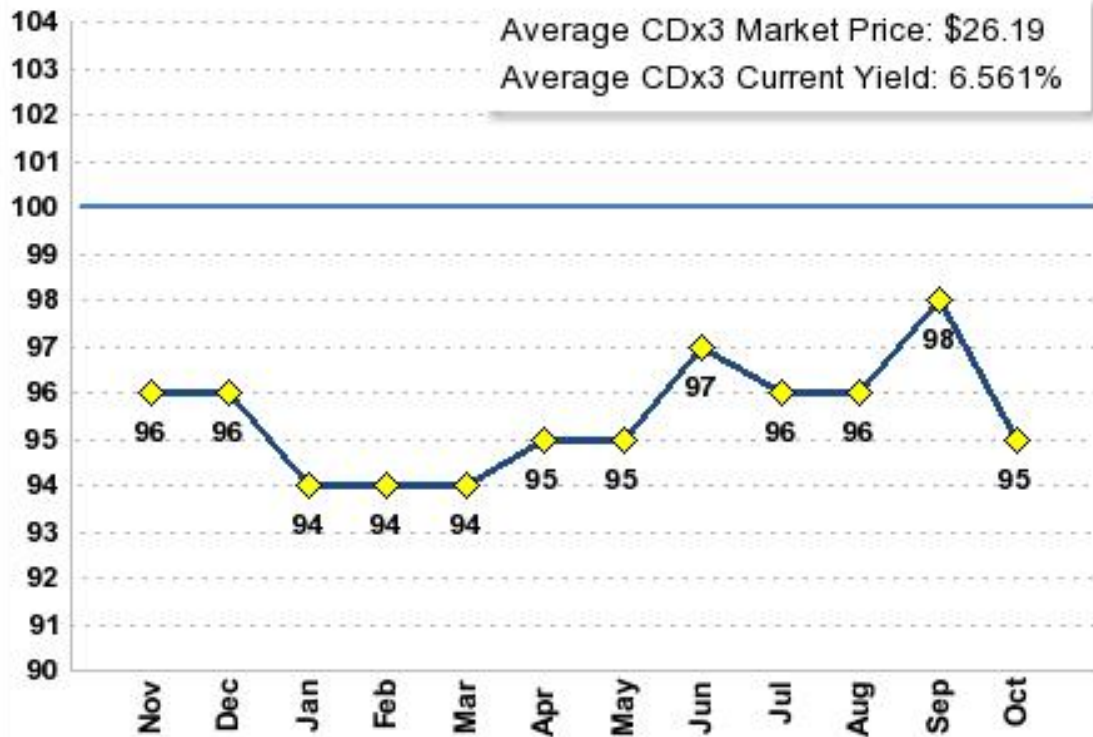
Resource for Preferreds:  
[www.CDx3investor.com](http://www.CDx3investor.com)



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## CDx3 Perfect Market Index

A VALUE OF 100 INDICATES A THEORETICAL 'PERFECT MARKET'



The CDx3 Perfect Market Index moves in the same direction as yield.  
> 100: Prices generally below par, portfolio will favor dividend income.  
< 100: Prices are generally above par, portfolio will favor capital gain income.