The Problem with the AAII Stock Screens

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I get this question surprisingly often.

> *Why does your **Piotroski Stock Screen** underperform the AAII Piotroski Stock Screen?*

To answer this question, first look at the awesome performance of AAII’s Piotroski screen.

Performance | Passing Companies | Screening Criteria | Chart

	Piotroski: High F-Score	S&P 500
YTD Return:	17.8%	1.3%
Five Year Return:	65.8%	18.6%
Ten Year Return:	28.3%	5.2%
Inception:	32.1%	4.1%

Data as of 3/31/2014

The Piotroski: High F-Score Screen represents AAII's interpretation of the investment approach and is not determined by the original strategist. The list of **passing companies** represents a hypothetical portfolio, which is used to track the screen’s performance on a chart.

2014 Q1 Performance is 17.8% with 32.1% Annualized Return

Yikes.

With this type of performance, why on earth would you even bother doing anything else?

Might as well sell everything you hold and just dump all your cash into whatever this screen tells you to buy right?

NO.

Because there is a huge fundamental flaw with this screen.

Let’s see if you can identify what it is.

Yup. Just two companies.

Even with extreme conviction, I don’t put 50% into any one stock unless I had a $1,000 portfolio.

Over the past 3-4 years I've been comparing and tracking AAII's Piotroski screener, there are many instances where the total number of holdings is less than 4.

You may be thinking that the backtest proves that despite the highly concentrated holdings, the results speak for themselves.

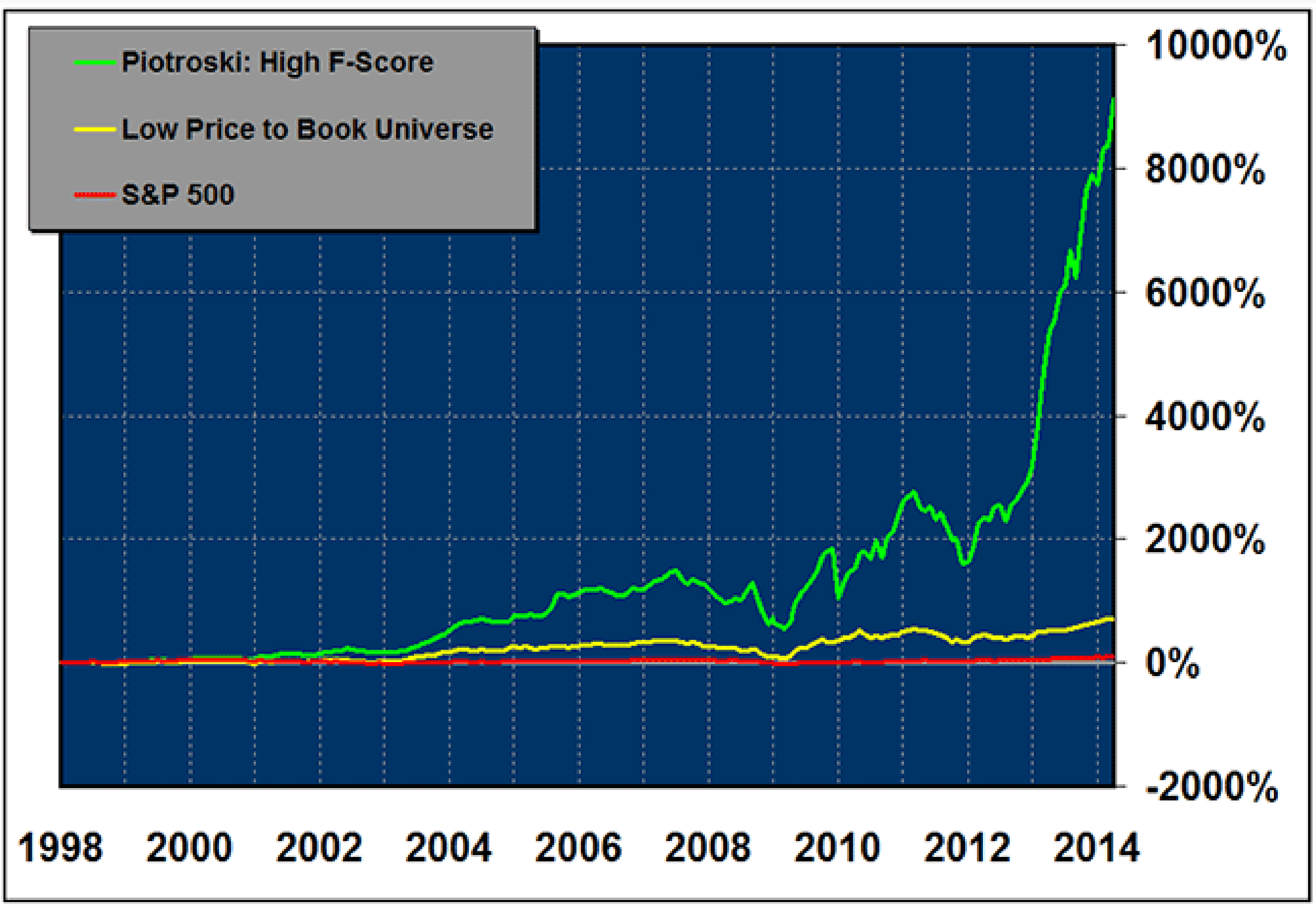
And from the theoretical backtest, it's proven right.

But…

What You Need to Know About Pre-Defined Screens

There are 2 main points you have to consider when following any screening strategy.

- Turnover and transaction fees
- Number of holdings



AAII's Historial Performance

Turnover and Transaction Fees

AAII updates their screener every month and the performance is measured by whichever stock is passing at that particular point in time.

That means every month, you need to sell and buy.

The problem is that the screen doesn't factor in the trading fees if there are lots of companies to buy/sell.

What's more, you may be unable to buy a stock at the proper price if the volume is low.

This will obviously affect your total return.

Number of Holdings

I make sure each of my **value screens** are based on holding 20 stocks of equal weight. No position is to be more than 5% at the time of purchase.

If only 10 stocks show up on the screen, then only 50% of the portfolio is used. The remaining 50%

Performance | Passing Companies | Screening Criteria | Chart

FULL SCREEN VIEW | DOWNLOADABLE EXCEL FILE

Companies are ranked by FScore(d) and then by Price/Book (a)

Company name	Ticker	Exchange	Price/Book	F Score Y1	Return on assets 12m	Return on assets Y1	Return on assets Y2	Cash from operations Y1	Income after taxes Y1	De As
ADDvantage Technologies Group,	AEY	Nasdaq	0.84	8	2.3	4	2.7	4	1.7	
Delta Apparel, Inc.	DLA	American	0.94	8	1.4	2.9	-0.8	32.2	9.2	3

Source: AAII's Stock Investor Pro and Thomson Reuters. Data as of 3/31/2014

AAII's "Hypothetical" Holdings and Extreme Concentration

remains in cash.

Compare that with AAII.

There are 2 passing companies at the moment. That means you have to hold 50% of your portfolio in each. If you have a $500k portfolio, are you willing to invest $250k into each small cap?

What happens if the results only list one stock?

Consider This if You Want to Use Quant Strategies

Make sure there is extensive research into the strategy as well as how the strategy is executed in detail.

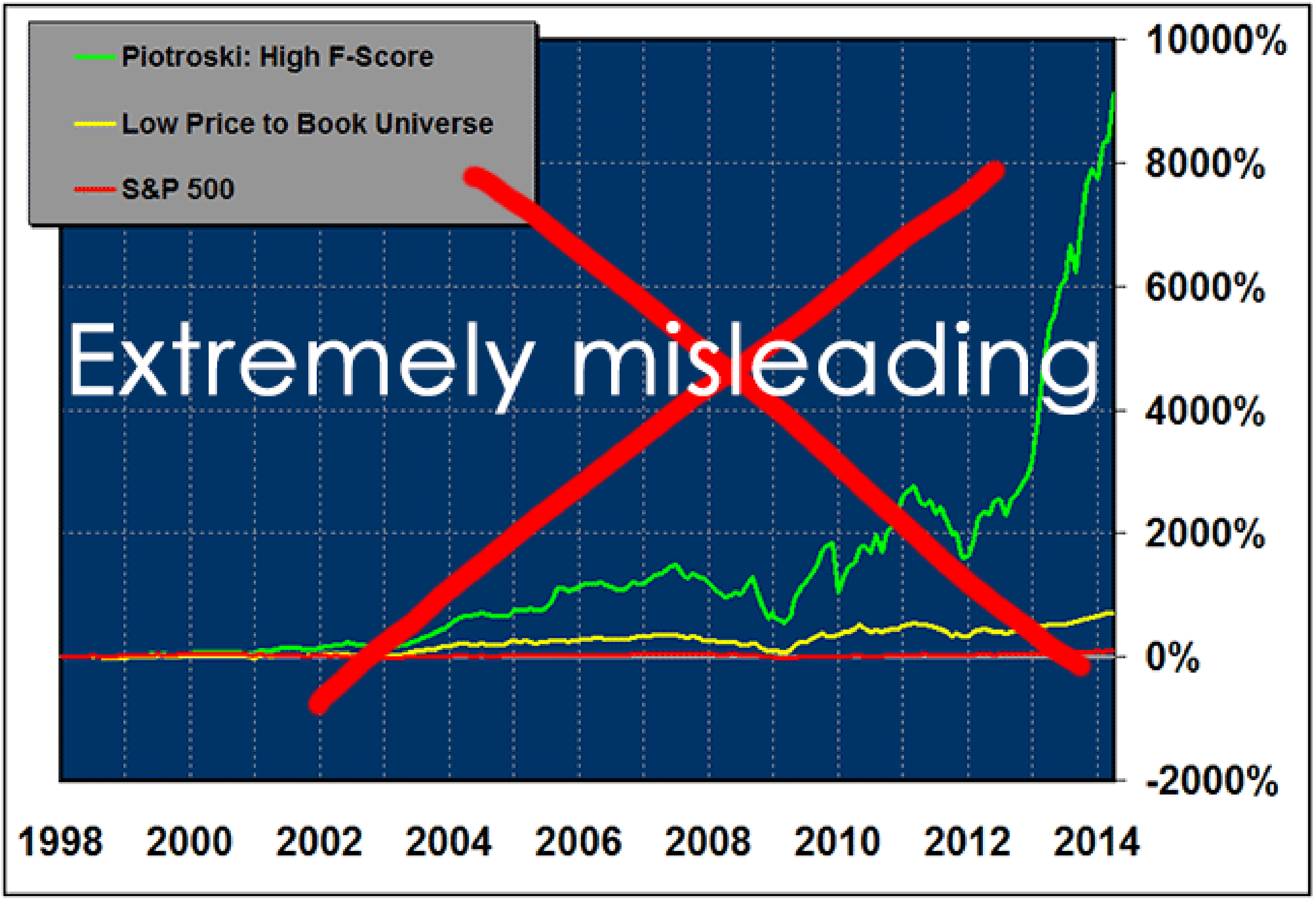
Look for something like what I did with the Magic Formula. See how I wanted to see **whether the Magic Formula worked** or not.

Don't get glossy eyed over the 9,000% return chart or the 32.1% annualized claim. If this was a real money portfolio, it would never be that high.

If something looks too good to be true, it is.

Never put more than 5% into each position from a screener because even as a basket, quant strategies fall the hardest when markets go bad. Even AAII's Piotroski screener looks like it fell somewhere between 30-50% in 2011.

As for the AAII Piostroski Screen?



Don't Fall for the Exponential Profit Chart

I really like AAII and what they do for investor education. I'm a member and also a subscriber to their stock research newsletter too, but their screens are best used as idea generators only.