



# Why Decades-Old Quantitative Strategies Still Work Today

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For some – particularly those who believe in efficient markets – a successful quantitative investment strategy is akin to a beautiful, quiet, undiscovered beach: Enjoy it while you can because once the masses get wind of it, its secluded beauty will be no more.

Other critics say that quantitative strategies become ineffective as times change. Approaches designed decades ago can't possibly work today because the investment landscape has evolved so much.

I couldn't disagree more. In fact, I've seen first-hand how winning quantitative investment strategies can continue to work long after they're well known and decades after they're developed.

Take the strategies of Benjamin Graham, the "Father of Value Investing" and Warren Buffett's mentor. I recently read a piece contending that Graham's approaches can't work in today's environment because times are so different from when Graham managed money. The reasoning sounds logical – after all, there was no high-frequency trading back in Graham's day, markets were far, far less global and the 401(k) and retirement-account investing that drive a lot of today's equity purchases weren't factors. Plus, certain variables can go in and out of fashion as investors develop new techniques for evaluating businesses and stocks.

But my experience and testing show that successful strategies continue to work long after they are created and revealed. In fact, the "guru strategy" I base on Graham's Defensive Investor approach is one of the top-performing models on my research website despite the fact that Graham published it 65 years ago.

Below is a table of 10- and 20-stock model portfolios picked with the Graham model, using various rebalancing frequencies. I have tracked these portfolios since mid-2003. On each rebalancing date, they are adjusted so that they include only the stocks that score highest according to my Graham-inspired model. As you can see, each portfolio under all rebalancing time periods has outperformed the broader market, as defined by the S&P 500. The strategy does exhibit more year-to-year variability than the market (although in 2008, the portfolios all avoided major losses due to the exclusion of financial

stocks), but the outperformance has also rewarded investors for the extra risk they may have taken by investing in the strategy.

	Graham 10-Stock			Graham 20-Stock			S&P 500
Rebalance Frequency	<i>Monthly</i>	<i>Quarterly</i>	<i>Annual</i>	<i>Monthly</i>	<i>Quarterly</i>	<i>Annual</i>	n/a
<b>Total Return</b>	<b>303.00%</b>	<b>309.40%</b>	<b>359.30%</b>	<b>315.30%</b>	<b>250.50%</b>	<b>282.20%</b>	<b>112.50%</b>
<b>Annualized Return</b>	12.50%	12.60%	13.70%	12.80%	11.20%	12.00%	6.60%
<b>2003</b>	45.10%	28.60%	26.30%	30.50%	26.00%	25.00%	11.10%
<b>2004</b>	21.50%	14.50%	21.30%	34.60%	28.60%	37.50%	9.00%
<b>2005</b>	10.40%	11.30%	17.70%	8.50%	10.50%	32.20%	3.00%
<b>2006</b>	26.00%	16.10%	11.20%	26.40%	14.50%	17.60%	13.60%
<b>2007</b>	-8.10%	5.60%	-13.10%	-1.40%	4.10%	-18.50%	3.50%
<b>2008</b>	-14.10%	-17.70%	-27.20%	-14.40%	-23.70%	-31.50%	-38.50%
<b>2009</b>	31.40%	35.80%	33.00%	36.50%	36.50%	29.50%	23.50%
<b>2010</b>	22.60%	34.60%	36.90%	24.30%	27.40%	29.40%	12.80%
<b>2011</b>	-19.00%	-13.70%	-4.60%	-6.20%	-8.40%	-1.40%	0.00%
<b>2012</b>	33.80%	19.80%	29.00%	31.90%	20.20%	15.80%	13.40%
<b>2013</b>	41.40%	42.20%	68.50%	24.50%	27.50%	50.60%	29.60%
<b>2014</b>	-22.90%	-12.70%	-10.40%	-24.20%	-12.90%	-15.40%	11.40%
<b>2015 YTD</b>	9.50%	5.40%	7.00%	3.00%	1.30%	5.30%	3.30%
<b>Accuracy</b>	56.90%	60.40%	63.30%	55.70%	57.90%	60.30%	N/A
<b>Beta</b>	1.16	1.14	1.13	1.17	1.16	1.1	1
<b>Std. Deviation</b>	28.00%	27.50%	27.50%	26.90%			13.92%

*Graham model returns cover the period from July 15, 2003 to May 22, 2015. Returns for the model and the S&P 500 are price returns only and do not include dividends or transaction costs. Returns are based on a real-time model run by Validea on its research website. Returns are "paper" returns and do not represent actual dollars invested. Accuracy is the percentage of stocks in the model portfolio that have appreciated in price since the inception of the portfolio.*

## **Real concepts, diverse variables**

There are a few key reasons for this outperformance. My Graham strategy (like my other "guru strategies") uses a variety of fundamental criteria that look at a stock from multiple angles. The Graham model looks at valuation from three perspectives: the price/earnings ratio using trailing 12-month earnings per share; the P/E using three-year average EPS; and the price/book ratio. That helps ensure that a one-year anomaly in earnings doesn't make a stock look deceptively cheap and that the strategy doesn't fail if the P/E or the P/B goes out of vogue for a while.

### **The Benjamin Graham Model, Step-by-Step**

**SECTOR:** The company cannot be a technology nor financial company.

**SALES:** The firm must be of "adequate size." This includes companies with annual sales greater than \$340 million.

**CURRENT RATIO:** The current ratio must be greater than or equal to 2. Companies that meet this criterion are typically financially secure and defensive.

**LONG-TERM DEBT IN RELATION TO NET CURRENT ASSETS:** For industrial companies, long-term debt must not exceed net current assets (current assets minus current liabilities). Companies that meet this criterion display one of the attributes of a financially secure organization.

**LONG-TERM EPS GROWTH:** Companies must increase their EPS by at least 30% over a ten-year period and EPS must not have been negative for any year within the last 5 years. Companies with this type of growth tend to be financially secure and have proven themselves over time.

**P/E RATIO:** The Price/Earnings (P/E) ratio, based on the greater of the current PE or the PE using average earnings over the last 3 fiscal years, must be "moderate," which this methodology states is not greater than 15. Stocks with moderate P/E ratios are more defensive by nature.

**PRICE/BOOK RATIO:** The Price/Book ratio must also be reasonable. That is, the Price/Book multiplied by P/E cannot be greater than 22.

Secondly, I'm not buying Graham-style stocks with stable earnings, more net current assets than long-term debt and low P/E and P/B ratios because I think that people will greatly value stocks with those qualities in a year or two. In fact, when I sell the shares, I hope the P/E and P/B ratios will be much higher. Instead, I'm buying them because those numbers tell a story about a company and its shares. Each variable plays a specific role, whether it be the information on a company's balance sheet, the effectiveness of its management or the attractiveness of its share price.

Sure, certain variables may go in and out of favor at certain times. But good strategies work because the variables they use get at the heart of good business and good investing. Might a metric come along that is better than the Graham strategy's net current assets to long-term debt comparison? Yes, perhaps. But the goal of that variable is to give a good assessment of the company's balance sheet. While one could argue that there is now a better variable to do that, I find it extremely hard to argue that looking for firms with more net current assets than long-term debt will ever be a bad way to assess a company's financial health. Think about what that metric measures. Essentially, it tells you whether a company could liquidate its assets and use the profits and any other cash it has to pay off all of its debts without going into the red. In what kind of financial world would that not be an attractive characteristic?

## **Well known and still working**

Good strategies succeed because they exploit some inefficiency in the market – a blind spot in the investing world – allowing you to buy good stocks that are mispriced. Kenneth Fisher's development of the price/sales ratio is a great example of that. Until he published *Super Stocks* in the mid-1980s, most investors were focused on price/earnings and price/book ratios when valuing a stock. But in his book, Fisher showed that sales were often a better indicator of a firm's business than either book value or earnings. Earnings, for example, can fluctuate greatly from year to year based on decisions to replace equipment or facilities in one year rather than in another, initiatives to put money into new research that will help the company reap profits later or changes in accounting methods. That can all turn one quarter's profits into the next quarter's losses, without regard for what Fisher thought was truly important in the long term: how well or poorly the company's underlying business was performing. While a stock might look unattractive based on its earnings or P/E, its price/sales ratio might more accurately signal that it was a bargain.

Theoretically, once that concept became well known, it should have stopped working since -- according to efficient market believers -- the market discounts all known information. The more investors who moved to exploit the inefficiency, the higher the prices of low-price/sales stocks would become and the less lucrative their returns. But that assumes that humans are rational, and decades and decades of market history show that they are not. Most people, whether individual investors or professional fund managers, don't buy stocks based on cold, hard fundamentals and financials. Instead they follow the crowd, try to capitalize on macroeconomic factors or base their decisions on their biased evaluations of a company's products and services. And if they try to follow a fundamentally based strategy, they often end up ditching it as soon as it hits short-term problems (which any strategy will do), as they can't take the emotional toll of staying the course when things aren't going well. Or, they alter the strategy by vetoing some of its picks that they find too anxiety provoking.

In fact, Joel Greenblatt, another of the gurus I follow, found that over a two-year period investors who were able to pick and choose between stocks his quantitative strategy approved of (and pick the timing of their trades) fared far worse than those who had their buying and selling done on automated fixed intervals with no ability to veto picks the formula recommended. While the latter beat the market by 21.4 percentage points, the former actually lagged the market by about 3 points. This is largely because they tended to miss out on many of the best performing stocks – beaten-down value plays that were the subject of scary headlines.

## **The bottom line**

Successful publicly disclosed strategies can continue to work over the long term if they incorporate a diverse set of variables that measure real and timeless concepts like profitability, debt levels and valuation. If, that is, you stick to them through the inevitable short-term ups and downs as their creators no doubt intended. This is not because it sounds good or makes sense theoretically. My guru-inspired strategies have been successful over the past dozen years, but they don't work on every pick and they don't work all the time. Neither will new, successful strategies. I guarantee that the most successful new stock-picking method of 2015 will stumble at some point.

The key is to pick a strategy whose variables analyze important fundamental business concepts – profitability, debt levels, revenue growth, etc. – and which buys at attractive prices stocks that rate highly in those areas. If you employ those types of strategies in an unemotional, systematic manner, you will continue to enjoy success long after the strategies are well known.

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