

Adjusting the Benjamin Graham Enterprising Investor Screen

by John Bajkowski

Article Highlights

- Benjamin Graham's contrarian view dictated stocks are most attractive when they are unpopular.
- AAIL's Graham Enterprising Investor screen has outperformed, but averages only four passing stocks per month.
- Loosening the price-earnings ratio criterion to the bottom 25% of all stocks leads to more passing companies.

Since 1934, the works of Benjamin Graham have helped to guide individual and professional investors in their quest to make good investment decisions.



Graham's intrinsic value approach grew out of the lessons learned from the stock market crash of 1929. Rather than trying to beat the market by seeking the best companies in the hottest industries, Graham argued that it is safer to build a portfolio of undervalued stocks that are being ignored or discriminated against by the market. Graham's approach focused on the concept of an intrinsic value that is justified by a firm's assets, earnings, dividends and financial strength.

Graham's philosophy continues to flourish through two primary books: "Security Analysis," co-authored with David Dodd, and "The Intelligent Investor." "Security Analysis" was first released as a college investment textbook back in 1934 and was most recently revised in 2008 (sixth edition, McGraw-Hill). "Security Analysis" presents the investment process by covering the analysis of the economy, sectors and industries, financial statements, and bonds and stocks. "Security Analysis" is still used as a textbook at Columbia Business School.

"The Intelligent Investor" was first released in 1949 and is geared toward the individual investor. Graham periodically updated the book until his death in 1976. "The Intelligent Investor" has been revised a number of times since, with additions by Warren Buffett and Jason Zweig, most recently in 2003 (revised edition, Collins Business). The book presents

Graham's basic philosophy of holding a mix of bonds and stocks and selecting stocks for both the "defensive investor" and the "enterprising investor."

Graham's contrarian view dictates that stocks will appear most attractive when they are relatively unpopular with the market. The selection process takes great conviction and discipline because the momentum of the market will seemingly be against the investor and there may be no clear indication as to when the market will come around and agree with you. However, the possibility of extraordinary gains only exists when the investor disagrees with the market.

We developed a series of stock screening filters based on Graham's investing philosophy in *Stock Investor Pro*, AAIL's fundamental stock screening and research database program, in 1995 and we have been tracking the performance of these strategies on AAIL.com. "The Intelligent Investor" lays out specific sets of rules to follow when selecting stocks for both the conservative, or defensive, investor and the more aggressive, or enterprising, investor. These two groups are distinguished not by the amount of risk they are willing to take, but rather by the amount of "intelligent effort" they are "willing and able to bring to bear on the task." The defensive, or passive, investor is one who does not have or is not willing to spend a great deal of time to analyze or track individual stocks. In contrast, the enterprising investor has greater market experience, as well as additional time to devote to portfolio management.

For the defensive investor, Graham recommends purchasing shares of important companies that have histories

of long-term profitability and strong financial positions. To Graham, important companies are those of substantial size, based on annual sales, with a leading position in a leading industry.

Enterprising investors, Graham felt, could expand their universe substantially, but purchases should be attractively priced as established by intelligent analysis. He also suggests that aggressive investors avoid new issues.

Our interpretations of the approaches have performed well, outpacing the market on an absolute and risk-adjusted basis.

However, the enterprising approach has suffered from a small universe of passing stocks. Consider these statistics: the average number of monthly holdings is four; and since the beginning of 1998, the screen has had 27 months where no companies met the screen criteria. On paper, the enterprising investor's selection strategy looks like a winner, but it is hardly an investable strategy in the real world. Graham recommended that investors build a diversified portfolio with a minimum of 10 stocks. For this article, we loosened the criteria used in AAII's *Stock Investor Pro* to see if we could create a more investable strategy using Graham's enterprising investing philosophy.

The Enterprising Investor Screen

Graham had a number of recommendations for how the enterprising investor could hope to profit in the market. Since it requires no effort to just buy an index, Graham felt that investors should beat the market averages if they were going to try. His approach in the "The Intelligent Investor" was geared toward the individual investor and he used the tools available at the time.

Graham's last revision of the "The Intelligent Investor" was written in late 1971 through early 1972, just before the personal computer facilitated stock screening for the individual investor. Graham used the S&P Stock Guide to illustrate how an investor could perform a manual screen with the monthly

booklet that provided basic fundamental data on around 4,500 stocks. Part of the simplicity of Graham's enterprising investor screen stems from the limited data set in the S&P Stock Guide and revolves around how an investor can page through the guide to find a list of candidates.

Price-Earnings Ratio

The primary valuation filter employed by Graham's enterprising investor screen involves the price-earnings ratio—share price divided by earnings per share. Graham felt that one of the keys to selecting stocks is to purchase them at a significant discount. Graham's first screen for the enterprising investor was to look for companies trading with price-earnings ratios below nine or 10 times trailing earnings. As Graham thumbed through the S&P Stock Guide, he thought about one in 10 stocks would pass such a filter in late 1971. We took this cue to establish a filter that required a company's price-earnings ratio to be among the lower 10% of all stocks.

While this criterion was not overly restrictive for the first three years that we ran the screen, it has proved to be too restrictive since 2001 when combined with the other criteria of the Enterprising Investor screen.

Our preference was to keep the filter as percentage rank, which automatically adjusts the actual maximum as market valuation fluctuates. *Stock Investor Pro* currently tracks 9,847 companies. To calculate a valid price-earnings ratio, a company must have positive trailing earnings over the year. Currently, only around 4,200 have a meaningful price-earnings ratio. To have a price-earnings ratio among the lowest 10% of valid ratios, a company's price-earnings ratio would need to be lower than 5.0.

We made a simple adjustment to allow companies with price-earnings ratios in the lowest 25% of stocks to pass the Graham Enterprising Investor screen. In today's market, that translates to a price-earnings ratio of less 10.0.

One warning that Graham gave of the low price-earnings filter was for cyclical firms with widely fluctuating

earnings. These firms often trade at high prices and low price-earnings ratios in good years when they should be sold, and low prices and high or non-existent price-earnings ratios in bad years when they should be considered for purchase. For these firms, Graham recommended constructing a price-earnings ratio using an average of earnings over the last three years. This type of analysis is used for the defensive investor screen.

Financial Condition

As a test of short-term liquidity, Graham specified a current ratio (current assets divided by current liabilities) of 1.5 or higher.

To measure the use of long-term debt, Graham required that long-term debt not exceed net current assets, or working capital, by 110%. Working capital is defined as current assets minus current liabilities.

Earnings Stability

Graham liked to look at the historical company performance over an extended period of time. He had a preference for companies that avoided losses during recessionary periods. This would point to industries such as utilities, insurance, food processing, medical supply firms and pharmaceuticals.

For the enterprising investor, Graham specified that earnings be positive for each of the last five years. This type of screen can be very restrictive after an economic recession.

Dividend Record

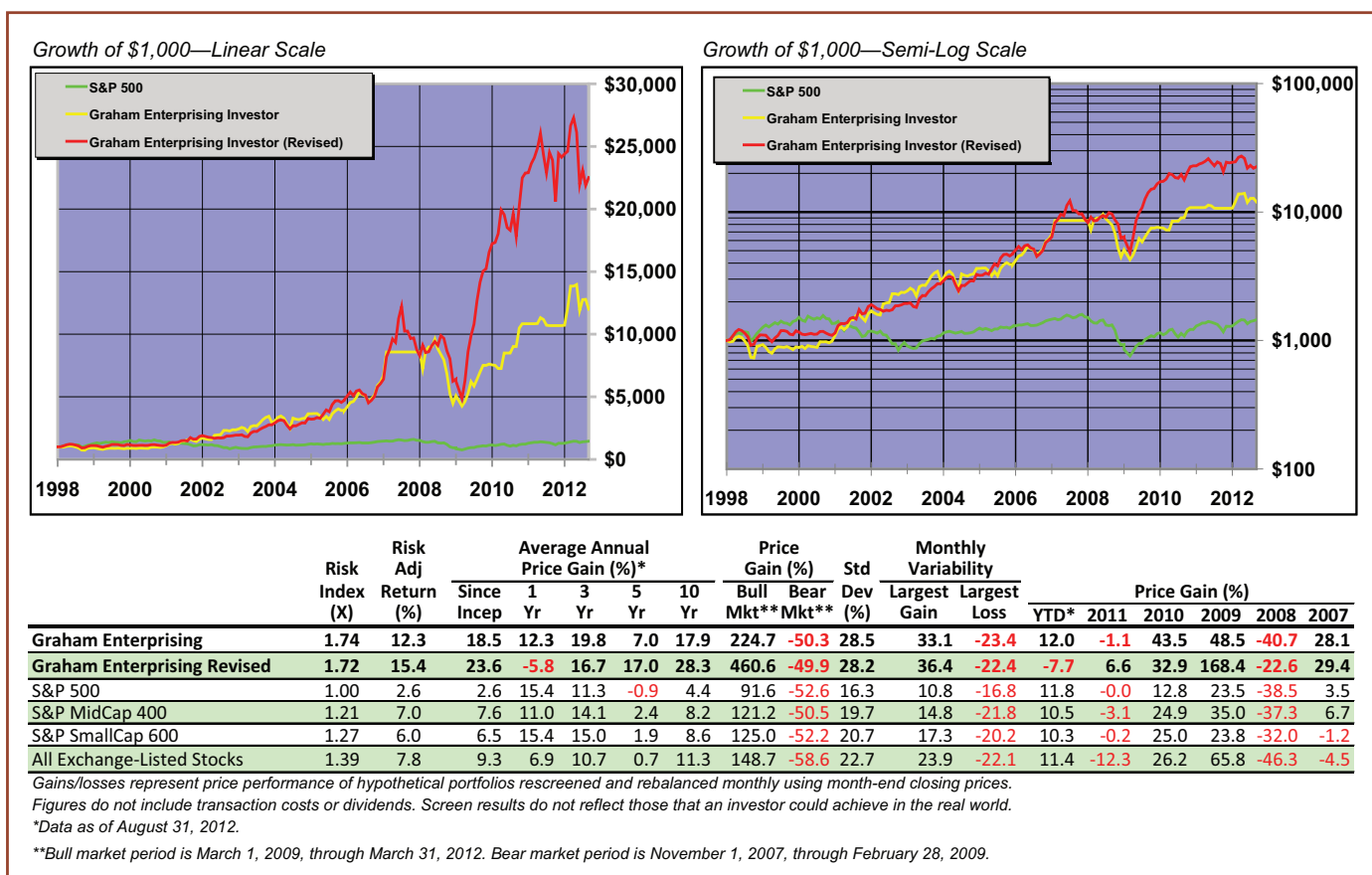
For the enterprising investor, Graham only specified that firms pay some level of current dividends—a simple filter that screens out two-thirds of the firms in *Stock Investor Pro* when used as a stand-alone criterion. As a rule, only more mature companies past their stage of strong, capital-intensive growth can afford to pay a cash dividend.

This filter will also cut out some stocks with low price-earnings ratios that are troubled and under financial duress.

Earnings Growth

When it came to earnings growth,

Figure 1. Performance of the Graham Enterprising Investor Screens



Graham required only that earnings for the latest year be higher than earnings five years ago. Without such a criterion, a screen looking for companies with low multiples may list companies with poor prospects. This is not the domain of the enterprising investor.

Price-to-Book-Value Ratio

Graham was a believer in using low price-to-book-value ratios to select stocks, and he normally required a ratio below 1.5 for the defensive investor. For the enterprising investor, however, the criterion specified that the current price-to-book-value ratio be less than or equal to 1.2. Since Graham felt that secondary firms that might pass the enterprising filter normally trade at a discount to their intrinsic value, it is not surprising that a tougher filter was specified.

The investor may wish to also consider using a percentile rank to specify the maximum price-to-book-value ratio.

This would allow the screen to adjust dynamically to market conditions. We had success in specifying a maximum price-to-book percentile rank of 25—the lowest quarter of companies.

Adequate Size of Enterprise

Graham had a preference for large companies. He felt that large firms have the resources in “capital and brain power” to carry them through adversity and back to a level of satisfactory earnings. This concern came into play for Graham because he looked at stocks of firms that became unpopular due to unsatisfactory developments that were of a temporary nature. Graham also felt that the market responds more quickly with a price increase when an improvement is shown for a large firm than a small firm.

The enterprising investor could invest in “speculative” issues such as small stocks, so he has no requirements for minimum company size. We

did, however, add a requirement that a company be listed on an exchange, and we are excluding foreign companies. These requirements help to ensure that audited financial statements are filed on a timely basis and the financials follow generally accepted accounting standards. These filters replace the requirement of a minimum share price of five dollars that avoided “penny stocks.”

Managing the Portfolio

Graham was a strong believer in protecting a portfolio against errors in judgment. For that reason, he placed a heavy emphasis on diversification. Graham stressed the need for a broadly diversified portfolio: a minimum of 15 holdings for the enterprising investor, but preferably a larger group consisting of about 30 of the best prospects selling at significant discounts from their intrinsic value.

Stock holdings should be reviewed

Table 1. Graham Enterprising Investor Portfolio Characteristics

Portfolio Characteristics (Median)	Graham Enterprising Investor	Graham Enterprising Investor Revised	All Exchange- Listed Stocks
Price-earnings ratio (X)	4.4	7.9	17.0
Price-to-book-value ratio (X)	0.47	0.92	1.55
Price-to-sales ratio (X)	0.38	0.37	1.59
Dividend yield (%)	2.6	3.0	0.3
EPS 5-yr. historical growth rate (%)	(19.9)	13.8	0.0
EPS 3-5 yr. estimated growth rate (%)	10.0	4.7	12.1
Market cap. (\$ million)	89	465	498
Relative strength vs. S&P (%)	(52.4)	(15.5)	(7.8)
Monthly Observations			
Average no. of passing stocks	4	10	
Highest no. of passing stocks	15	33	
Lowest no. of passing stocks	0	0	
Monthly turnover (%)	44.0	26.5	

Source: AAI's Stock Investor Pro/Thomson Reuters. Data as of 9/14/2012.

at least annually, he said, paying attention to dividend returns and the operating results of the company and ignoring share price fluctuations. However, if the holdings were properly valued originally, he felt there would be little need for changes.

Graham felt that as long as the earnings power of the holdings remained satisfactory, the investor should stick with the stock and ignore any market movements, particularly on the downside. On the other hand, investors should take advantage of market fluctuations on the upside, when a stock becomes overvalued (or fairly valued, for

stocks that were purchased below their intrinsic value); at these times, investors should sell and replace their holding with one that is more fairly valued or undervalued.

Performance

Figure 1 shows selected performance and risk statistics for AAI's original Graham Enterprising Investor screen, our revised screen and market indexes. Year-to-date as of August 31, 2012, the revised screen has bucked the trend of the broader market and generated a price loss of 7.7%. Graham

warned investors not to lose patience if selections fail to advance soon after their purchase. By way of contrast, the original screen has a price gain of 12.0% year-to-date, but the screen averaged one single passing company this year, while the revised screen averaged near 10 passing companies. Since the beginning of 1998, the Enterprising Investor Revised screen has had an average annual gain of 23.6%, outperforming the indexes over that period as well as the original enterprising screen.

Note that we are displaying a semi-log performance chart that illustrates the growth of \$1,000 investment. The semi-log chart does a better job of illustrating the variability over a long period of time, especially for early-period performance.

Looking at the overall risk of the screens, we see that the risk index is around just over 1.7 for both screens, making them over 70% more riskier than the S&P 500 index since the beginning of 1998. This lowers the risk-adjusted return to 15.4% a year for the revised screen and 12.3% for the original screen, which is still significantly better than the S&P indexes as well as the typical exchange-listed stock.

The bear market returns are generally comparable for all of the screens and indexes; however, the Graham Enterprising Investor Revised screen has really shone during the most recent bull market which was calculated from the end of February 2009 through March 2012. The revised screen has gained an impressive 460.6%, more than doubling

Table 2. Companies Passing the Graham Enterprising Investor Revised Screen

Company (Exchange)	P/E Ratio		P/B Ratio (X)	Div Yield (%)	Current Ratio (X)	LT Debt to Work'g Capital (%)	Ann'l EPS Grth (5 Yr) (%)	Market Cap (\$ Mil)	9/14 Price (\$/Sh)	52-Wk Price Chg (%)	Industry
	Cur-rent (X)	5-Yr Avg (X)									
AMCON Distributing Co. (DIT)	7.0	5.4	0.90	1.1	3.3	55.5	48.1	41	67.86	15.0	retail (grocery)
Mantech International (MANT)	7.5	15.5	0.76	3.6	1.9	63.5	19.2	861	23.32	(31.0)	software & program'g
Friedman Industries (FRD)	8.2	20.1	1.07	5.1	7.9	0.0	2.7	69	10.13	10.8	iron & steel
Corning Incorporated (GLW)	9.2	10.3	0.93	2.3	5.0	43.1	8.4	19,536	13.12	(5.8)	technology

Source: AAI's Stock Investor Pro/Thomson Reuters. Data as of 9/14/2012.

What It Takes: Graham Enterprising Investor Revised Criteria

- The price-earnings ratio is among the lowest 25% of the database (Percent Rank less than or equal to 25)
- The current ratio for the last fiscal quarter (Q1) is greater than or equal to 1.5
- The ratio of long-term debt to working capital for the last fiscal quarter (Q1) is less than 110%
- Earnings per share for each of the last five fiscal years and for the last 12 months have been positive
- The company intends to pay a dividend over the next year (indicated dividend is greater than zero)
- Earnings per share for the last 12 months are greater than the earnings per share from five years ago (Y5)
- Earnings per share for the last fiscal year (Y1) are greater than the earnings per share from five years ago (Y5)
- The price-to-book ratio is less than or equal to 1.2
- The company is domestic and exchange-listed

the return of the original screen and surpassing the index returns by an even wider margin.

Profile of Passing Companies

The characteristics of the stocks passing the screens as of September 14, 2012, are presented in Table 1. Historically, four companies, on average, have passed the original Enterprising Investor screen each month since the start of 1998. By loosening the price-earnings percentile rank from 10% to 25%, we were able to average a greater number of passing companies. The Graham Enterprising Investor Revised screen averages 10 passing companies. The monthly turnover rate was also reduced from 44.0% per month to 26.5%.

The passing companies are listed in Table 2 in ascending order by current price-earnings ratio.

The Graham screens focus on

stocks with low price-earnings and price-to-book-value ratios. Because of the screens' strict value-oriented rules, it is not surprising that the current group of passing companies have lower multiples than the typical exchange-listed stock. The 7.9 price-earnings median of the four stocks currently passing the revised enterprising screen is less than half of the median for all exchange-listed stocks.

Graham thought it was foolish to buy a stock only because its stock price was up and sell a stock if was down. He did feel that one should compare the price to a firm's intrinsic value. It is not surprising that the current holdings of the enterprising screens have underperformed the S&P 500 as well as the typical exchange-listed stock over the last 52 weeks. The Graham enterprising screens tend to pick up stocks that are currently cheap on a price-earnings ratio and price-to-book-value ratio basis because they have shown recent stock

price declines.

Graham in Summary

Graham understood that the investor's chief problem, and worst enemy, is oneself. Knowledge of finance, accounting and investment lore does not lead to success if emotions cannot be controlled. An intelligent investor should profit from other people's foolish decisions.

No matter how well a stock screen has performed historically, it is important to remember that stock screening is only the first step in the analysis process. Once you have winnowed the stock universe down to a more manageable set of companies, it is important to perform additional due diligence on the remaining companies to verify their financial strength as well as how well they match your risk tolerances and investment time horizon. ▲

The AII Stock Screens

AII has been developing a wide range of screening strategies over the years, some following the approaches of popular investment professionals, others tied to basic investing principles. Each month over 60 separate screens are performed using AII's *Stock Investor Pro* and the companies passing each screen are reported on AII.com.

The performance of the stocks passing each screen is tracked on a monthly basis. The month-to-month closing price is used to calculate the return, with equal investments

in each stock at the beginning of each month assumed. The impact of factors such as commissions, bid-ask spreads, cash dividends, time-slippage and taxes is not considered. This overstates the reported performance, but all approaches are subject to the same conditions and procedures. Higher turnover portfolios would typically benefit more from these simplified rules. Sell rules are the same as the buy rules: The screens are simply reapplied using each subsequent month's data.

John Bajkowski is president of AII.