Invest Like Wall Street Legends

Market beating portfolios and stock analysis based on strategies of legendary investors like Warren Buffett, Benjamin Graham and Peter Lynch.

Validea's Stock Research suite is a web-based investment research tool that analyzes stocks using a series of systematic, fundamentally-oriented investing models that are based on the strategies of Wall Street legends. The service consists of 12 "guru"-inspired models that are used in individual stock analysis, new investment idea generation, model portfolios, trade alerts, stock ratings and more.

All of Validea models were selected based on their track records of long-term market outperformance. The "guru" models are all fundamental-based strategies that utilize financial, valuation, and price-based criteria to analyze stocks. The models will select small-, mid- and large-cap stocks and their styles, while primarily value-based, also incorporate aspects of growth, momentum, and income stock-selection approaches. The models, which are outlined in detail below, are based on the stock-picking approaches of well-known investors such as Warren Buffett, Ben Graham, Martin Zweig, John Neff and many others. They sit at the foundation of our investing system. Stocks in the investment universe are filtered through each "guru" model and obtain a final score (on a scale of 0% to 100%) based on how closely they match each model's strict selection criteria and factor scoring.

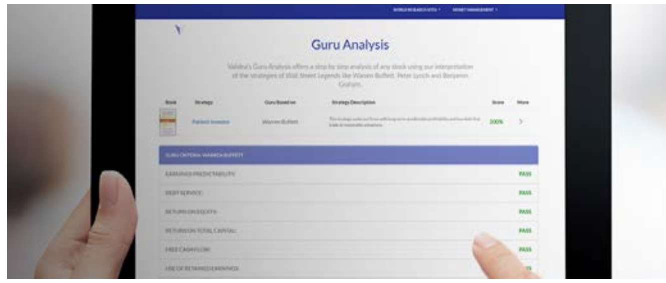
This product paper was developed to help give investors a more thorough understanding of both the tools and research available on Validea and the strategies that sit at the heart of our investing system. Below the product overview you will find a summary of the stock selection methodologies captured on Validea, the book or academic paper utilized in extracting the specific methodology, and an outline of the most important fundamental factors utilized in each model.

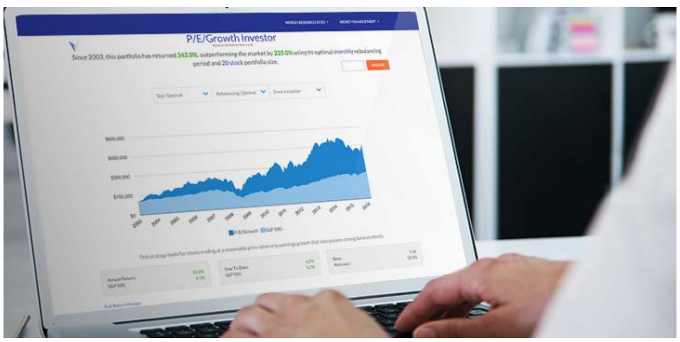
The data that powers the Validea suite is Thomson Reuters North American Fundamental Data Set.

Product/Feature Overview

Guru Analysis

Validea's Guru Analysis offers a step by step fundamental analysis of any stock using our interpretation of the strategies of Wall Street Legends like Warren Buffett, Peter Lynch and Benjamin Graham. Users can analyze over 6,000 stocks across 12 distinct models to see why a stock passes or fails a particular methodology. Strategies consist of as few as two factors to upwards of 20. To view a detailed strategy overview, see the below. Scores are rendered daily based on previous day pricing and most current fundamentals.





Model Portfolios

(Guru, Consensus, Country, Industry Portfolios)

We've developed portfolios based on the investment strategies of history's most successful stock pickers, including Peter Lynch, Warren Buffett, Benjamin Graham, Martin Zweig, Ken Fisher and Joel Greenblatt. Validea's industry and country portfolios contain the highest scoring stocks according to our system in each industry or country/region.

Users have the ability to view 10 and 20 stock model portfolios that are changed monthly, quarterly or annually. Changes are made on set dates, making the portfolios changes easy to view and follow. Each portfolio contains the historical and year-by-year performance record, a full set of historical holdings, portfolio positions and changes.

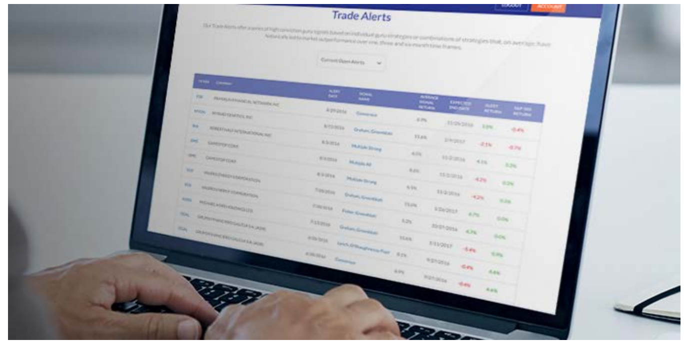
In addition to the guru-centric model portfolios, there are two consensus-based models and a number of country and industry based portfolios consisting of the stocks that get the highest scores from multiple strategies simultaneously.

Stock Screener

Screen for stocks passing the proven strategies of Wall Street Legends like Warren Buffett, Peter Lynch and Benjamin Graham. The screening application also allows for strategies to be combined (i.e. different models to seek stocks that score highly by more than one approach) and allows for users to add in their own fundamental filters to further refine the list of investment ideas.

Trade Alerts

Trade Alerts offer a series of high conviction guru signals based on individual guru strategies or combinations of strategies that, on average, have historically led to market outperformance over one, three and six month time frames. When a new trade alert is open or an existing trade alert is closed, users receive immediate notification of it.



And More …

- Guru Stock reports with Buy-Sell ratings.
- Real-time email alerting system on stock, strategy and portfolio changes.
- The Validea Hot List newsletter, which discusses a wide range of investing topics.
- Individual equity Upgrades and Downgrades based on the guru strategies.

Pricing / Feature Matrix:

	Basic			Professional		
Price	$29.95/mo	$74.95/3mo	$269.95/yr	$99.95/mo	$269.95/3mo	$889.95/yr
A - Guru Analysis		✓			✓	
B - Guru Stock Screener		✓			✓	
C - Validea Hot List Newsletter & Email Alerts		✓			✓	
D - Guru Model Portfolios (inc. Consensus portfolios)		✓			✓	
E - High Conviction Trade Alerts					✓	
F - Country & Industry Portfolios					✓	
G - Guru Stock Reports & Enhanced Email Alerts					✓	

Investment Models and Factors

At Validea, we have investment models based on history's best investors, including Warren Buffett, Peter Lynch, Benjamin Graham, Kenneth Fisher, Martin Zweig, Joel Greenblatt and others. When users enter a ticker symbol on Validea, stocks are scored through the various models and investment criteria listed below. Each stock gets a score of 0-100% and our research shows that stocks with the highest scores tend to outperform the market over time.

The Benjamin Graham-based Value Model: Based on the "Defensive Investor" approach Graham laid out in his 1949 classic *The Intelligent Investor*, the model is indeed defensive. It explicitly eschews technology stocks (which Graham found too risky), and implicitly avoids financial firms (thanks to its stringent debt requirements). The model requires that a company have at least as much net current assets as it does long-term debt, and that it have a current ratio (current assets/current liabilities) of at least 2.0. Graham was known as the "Father of Value Investing", so it also looks for cheap stocks. Neither the stock's trailing 12-month price/earnings ratio nor its P/E based on three-year average earnings can be over 15, and the product of its P/E and price/book ratios can't be more than 22.

The Graham-based model is a deep value approach that utilizes 7 fundamental factors, including valuation and financial strength criteria

Source: *The Intelligent Investor: The Definitive Book on Value Investing*

- **Sector**: Graham avoided “risky” sectors like technology.
- **Sales**: The investor must select companies of "adequate size" in terms of sales.
- **Current ratio**: The current ratio must be greater than or equal to 2
- **Long-term debt in relation to net current assets**: Long-term debt must not exceed net current assets
- **Long-term EPS growth**: Companies must increase their earnings per share over time and not have recent negative earnings.
- **Price/earnings ratio**: Ratio must be less than 15.
- **Price/book ratio**: Price/Book multiplied by P/E cannot be greater than 22

The Warren Buffett-based High Quality & Value Model: The Buffett-based model is derived from the book *Buffettology*. It looks back a full decade into a firm's fundamentals and financials, targeting companies that have grown earnings per share on a consistent basis over the past 10 years, and which have averaged returns on equity of at least 15% over that same 10-year span -- a sign of the “durable competitive advantage” that Buffett is known to seek in his investments. The model also likes companies that are conservatively financed, looking for those that have enough annual earnings that they could, if need be, pay off all of their long-term debt within five years (and preferably within two). It also looks for companies with a positive free cash flow, and a decade-long return on retained earnings of at least 12%. In terms of value, the stock doesn't need to be dirt-cheap, but it does need to have an earnings yield greater than the yield on a long-term Treasury bond.

The Buffett-based model is a large cap high quality and value strategy that utilizes 7 core fundamental factors and expected stock return estimates

Source: *Buffettology*

- **Earnings predictability**: Looks for 10 years of consistent earnings, showing durable competitive advantage.
- **Debt service**: Must have enough annual earnings to pay off debt within five years.
- **Return on equity**: Above-average ROE for last 10 and 3 years. Further indicates a durable competitive advantage.
- **Return on total capital**: Above-average ROTC for last 10 and 3 years (a check against the ROE method).
- **Free cash flow**: Firm must be generating more cash that it is consuming.
- **Use of retained earnings**: Awards firms where retained earnings have benefited shareholders over time.
- **Share repurchase**: Share count should be falling, indicating company is buying back stock.

- **Initial rate of return**: Calculate expected return using EPS and ROE methods.
- **Expected stock price return**: Seeking stocks with expected annual returns of 12-15%.

The Motley Fool-based Small-Cap Growth Model: Based on a strategy disclosed by brothers Tom and David Gardner (the creators of the Motley Fool web site), the Fool portfolio targets small-cap growth stocks, looking for companies with high profit margins, strong sales and earnings growth, high relative strengths, low debt, and low P/E-to-Growth ratios. It also takes into consideration several other factors, including price and volume levels, and a company's income tax level.

The Motley Fool-based model is a small cap growth investor model that utilizes 17 fundamental factors. Growth, momentum and profits are in focus

Source: *The Motley Fool Investment Guide*

- **Profit margin**: Companies must have an after-tax profit margin of 7%.
- **Relative strength**: Looks for price momentum -- relative strength score of 90 or better is best.
- **Compare quarterly sales and EPS growth to the same period last year**: 25% year over year sales and earnings growth.
- **Insider holdings**: Insiders should hold at least 10% of shares outstanding.
- **Cash flow from operations**: Looks for positive free cash flow.
- **Profit margin consistency**: Wants to see that profit margins have been consistent or increasing over the past 3 years.
- **Research & Development as a percentage of sales**: Investments in R&D are maintaining or increasing.
- **Cash and cash equivalents**: Rewards companies with cash, which can be used to pay down debt.
- **Inventory to sales**: Penalizes firms where the inventory to sales is increasing too rapidly year over year.
- **Accounts receivable to sales**: Penalizes firms where accounts receivable to sales is rising too quickly.
- **Long term debt/equity ratio**: High levels of debt compared to equity are a negative in this model.
- **"The Fool Ratio" (P/E-to-Growth)**: A low PEG ratio indicates good value relative to the earnings growth rate.
- **Sales**: Wants to see firms with sales of $500 million or less to identify those firms under the radar of institutions.
- **Average shares outstanding**: Wants the number of shares outstanding remaining the same or falling (not increasing).
- **Daily dollar volume**: Looks for DDV of $25 million or less. These stocks are relatively undiscovered by institutions.
- **Price**: The optimal per-share price is between $7 and $20 per share.
- **Income tax percentage**: Income tax paid should be greater than 20% of pretax income to make sure firm isn't being helped by short-term, unsustainable tax benefits.

The Kenneth Fisher-based Value Model: Based on the strategy that Fisher (a longtime Forbes columnist, money manager, and author) unveiled in his 1984 classic *Super Stocks*, this approach focuses on a metric Fisher pioneered: the price/sales ratio (PSR). While investors for decades relied heavily on the P/E ratio, Fisher found that earnings -- even the earnings of good companies -- can fluctuate greatly from year to year as firms replace equipment or facilities in one year rather than in another, use money for new research that will help the company reap profits later on, or change accounting methods. Sales, however, are much more consistent, and the PSR can thus find strong firms that are going through earnings "glitches" that have driven their stocks down to bargain levels. Fisher also looked at a variety of other metrics, including the debt/equity ratio, profit margins, and earnings growth.

The Fisher-based model is a value model that utilizes 6 fundamental factors, with a focus on stocks with low Price-to-Sales ratios

Source: *Super Stocks*

- **Price/sales ratio**: A low PSR helps identify stocks that are good values. Stocks with a PSR of less than 0.75 may be "Super Stocks"
- **Total debt/equity ratio**: Less debt equals less risk according to this methodology
- **Price/research ratio**: Companies in the Tech and Medical sectors are attractive if they have low Price/Research ratios
- **Long-term EPS growth rate**: Wants to see an inflation adjusted long-term EPS growth rate greater than 15%.
- **Free cash per share**: Models favors companies that have positive free cash per share.
- **3-year average net profit margin**: Rewards firms with an average net profit margin of 5% or greater over a 3-year period.

The James O'Shaughnessy-based Cornerstone Value and Cornerstone Growth Models: This approach actually uses two models -- one growth and one value. The growth model targets companies with high relative strengths and PSRs below 1.5, a combination O'Shaughnessy found would identify stocks that were being embraced by the market, but which hadn't gotten too pricey. It also looks for firms that have upped earnings per share in each year of the past half-decade, without regard to the magnitude of the increases.

The O'Shaughnessy-based Cornerstone Value and Cornerstone Growth models utilize 5 and 4 fundamental factors, respectively

The value approach, meanwhile, targets big firms (those with sales at least 1.5 times the market mean) with better-than-average cash flows per share and high dividend yields.

Source: *What Works on Wall Street: A Guide to the Best-Performing Investment Strategies of All Time*

Cornerstone Value Model

- **Market cap**: Greater than $1 billion.
- **Cash flow per share**: Above market average
- **Shares outstanding**: Above market average
- **Trailing 12 month sales**: At least 1.5x market avg.
- **Dividend**: Of stocks that pass the first four criteria, select the 50 with the highest dividend yields.

Cornerstone Growth Model

- **Market cap**: Greater than $150 million.
- **Earnings persistence**: 5 years of rising earnings.
- **Price/sales ratio**: PSR of less than 1.5.
- **Relative strength**: Of stocks that pass the first three criteria, select the 50 with highest relative strengths.

The Peter Lynch-based Growth-At-a-Reasonable-Price (GARP) Model: Just as Fisher pioneered the use of the PSR, Lynch, one of the most successful mutual fund managers of all time, made the P/E-to-Growth ratio a popular stock investing tool. By dividing a firm's P/E ratio by its historical growth rate, Lynch found good growth firms selling on the cheap. The rationale: The faster a company is growing, the higher the valuation you should be willing to pay for its earnings. PEGs below 1.0 are acceptable to this model, with those under 0.5 the best case. The Lynch-based approach also looks at factors like the debt/equity ratio, inventory/sales ratio, and, for financial firms, the equity/assets ratio and return on assets rate.

The Lynch-based GARP model utilizes 7 factors. Model determines if firm is a fast grower, slower grower or stalwart using EPS growth rate

Source: *One Up On Wall Street: How To Use What You Already Know To Make Money In The Market*

- **P/E-to-Growth ratio**: Model rewards companies with a low PEG ratios (P/E divided by growth rate). Dividend yields are factored into growth rate for larger firms.
- **Sales and P/E ratio:** For firms with sales greater than $1b, P/E should be below 40.
- **Inventory to sales:** Avoids firms whose inventory is growing faster than sales.

- **EPS growth rate:** This methodology likes to see earnings growth in the range of 20% to 50%.
- **Total debt/equity ratio**: Wants a low debt/equity ratio, which helps determine the financial strength of the company.
- **Free cash flow:** Favors firms with strong free cash flow; prefers not to invest in firms that rely heavily on capital spending.
- **Net cash position:** A bonus if the company has a Net Cash/Price ratio above 30%

The David Dreman-based Deep Value and Contrarian Model: A great student of investor psychology, Dreman found that investors are prone to overreaction. This meant solid companies going through short-term troubles could have their shares beaten down far more than they deserved. Then, when the short-term problems were rectified, the stocks often bounced back very strong. To find these types of unloved stocks, Dreman looked for firms with price/earnings, price/cash flow, price/book, and/or price/dividend ratios in the cheapest 20% of the market. Sometimes, however, a stock is cheap because it's a dog and everyone knows it. So to separate the unfairly beaten down firms from the dogs, Dreman applied a variety of financial tests to a stock, looking at debt levels, profit margins, returns on equity, and several other factors.

The Dreman-based model utilizes 13 fundamental factors. Four value criteria are combined with financial strength factors

Source: *Contrarian Investment Strategies - The Classic Edition*

- **Market cap**: Company should be in the largest 1500 companies in the entire market.
- **Earnings trend**: A company should show a rising trend in the reported earnings for the most recent quarters
- **EPS growth rate**: Looks for companies with an EPS growth rate higher than the S&P 500 in the immediate past and future.
- **Stocks need to pass at least two of the following four major value criteria:**
    - *Price/earnings ratio (P/E):* P/E of a company should be in the cheapest 20% of the overall market
    - *Price/cash flow (P/CF) ratio:* P/CF of a company should be in the cheapest 20% of the overall market
    - *Price/book (P/B) value:* P/B of a company should be in the cheapest 20% of the overall market
    - *Price/dividend (P/D) ratio:* P/D of a company should be in the cheapest 20% of the overall market
- **Current ratio**: The current ratio must be greater than or equal to the average of its industry or greater than 2.0.
- **Payout ratio**: A good indicator that a company has the ability to raise its dividend is a low payout ratio.
- **Return on equity**: ROE should be greater than the avg. of the top one-third of ROEs from among the 1500 largest stocks.
- **Pre-tax profit margins**: Wants pre-tax profit margins of at least 8%; anything over 22% is considered phenomenal.
- **Yield**: Dividend yield equal to or greater than the market's yield.
- **Total debt/equity**: The D/E ratio should not be greater than 20% or should be less than the average Debt/Equity for its industry

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The Martin Zweig-based Growth Stock Model: Zweig, who put up an exceptional long-term track record with his investment newsletter, was something of a conservative growth investor. He dissected a firm's earnings from a variety of angles, looking not just for high growth rates, but also for growth that was accelerating. He also wanted that growth to be driven by sales, not one-time cost-cutting efforts, and he didn't want earnings to be amped up by high leverage. He also thought there was a limit to how much one should pay for growth -- this approach targets stocks with P/E ratios no greater than three times

The Zweig-based Growth model utilizes 13 fundamental factors. Multiple earnings growth and consistency factors are at its core

the market average, and never more than 43 regardless of what the market average is. Zweig also didn't want P/Es to be too low, because that could be a sign of a dog. The model I base on his writings uses a minimum P/E of 5.

Source: *Martin Zweig's Winning on Wall Street*

- **Price/earnings ratio**: P/E greater than five but no more than 3x market P/E, and never more than 43
- **Revenue growth in relation to EPS growth**: Revenue growth must not be substantially less than earnings growth.
- **Sales growth rate**: The rate of quarterly sales growth needs to be rising.
- **Current quarter earnings**: The current quarter's EPS needs to be positive
- **Quarterly earnings one year ago**: The EPS for the quarter one year ago must be positive
- **Positive earnings growth rate for current quarter**: The growth rate of the current quarter's EPS compared to the same quarter a year ago must also be positive.
- **Earnings growth rate for the past several quarters**: Earnings growth in the previous 3 quarters should be at least half of the long-term EPS growth rate
- **EPS growth for current quarter must be greater than prior 3 quarters**: The growth rate of the current quarter earnings must be greater than the average growth rate of the prior three quarter's earnings.
- **EPS growth for current quarter must be greater than the historical growth rate**: The EPS growth rate for the current quarter must be greater than or equal to the historical growth rate.
- **Earnings persistence**: A company's earnings should increase each year for a five year period.
- **Long-term EPS growth**: The long-term earnings growth rate must be at least 15% per year.
- **Total debt/equity ratio**: Wants relatively low levels of debt on the balance sheet vs. the firm's industry.
- **Insider transactions**: Inside buying adds to the attractiveness of a stock.

The John Neff-based Value and Dividend Model: Given his longevity, Neff belongs in the conversation about who is the greatest fund manager of all time. Over a remarkable three-decade run that began in 1964, Neff focused on finding value names with an emphasis on dividends as well. Neff looked for unloved stocks using the price/earnings ratio, seeking stocks with P/Es that were between 40% and 60% of the market average. From this group, he looked for firms with steady, sustainable EPS growth (between 7% and 20% per year, and driven by sales growth), as well as positive free cash flows. He also used what he called the "total return/PE" ratio, which combined a stock's growth rate and dividend yield and divided that by its P/E ratio to find good values. The variable underscored Neff's belief that strong dividends were an often-overlooked part of how investors could beat the market.

The Neff-based Value and Dividend model utilizes 7 fundamental factors. It seeks stocks with low valuations and high dividend yields

Source: *John Neff on Investing*

- **Price/earnings ratio:** The P/E ratio for non-cyclical companies must be between 40% and 60% of the market P/E.
- **EPS growth:** This strategy likes to see a historical earnings growth rate between 7% and 20%.
- **Future EPS growth:** The growth rate should be confirmed by the analyst consensus future growth rates (current year and long term).
- **Sales growth:** Historical sales growth must be either greater than 7% or at least 70% of EPS growth.
- **Total return/PE ratio:** The total return (EPS growth + dividend yield) divided by the P/E ratio should be at least double that of the market or of its industry.
- **Free cash flow:** Positive free cash flow adds to the attractiveness of a stock.
- **EPS persistence:** Earnings in each of the past 4 quarters should have increased from the quarter a year before.

The Joel Greenblatt-based Value and Quality Model: In his *Little Book That Beats The Market*, hedge fund manager Greenblatt laid out a stunningly simple way to beat the market using two -- and only two -- fundamental variables: return on capital and earnings yield. To be fair, it's actually a bit more complicated than that; his "Magic Formula" (as he dubbed it) and our Greenblatt-based model don't use a simple earnings yield (that is, a simple earnings/price ratio). Instead, they use earnings before interest and taxes and divide by enterprise value, which includes not only the price of the company's shares, but also the amount of debt it uses to generate earnings. Similarly, for return on capital, the strategy divides a firm's earnings before interest and taxes by its tangible capital employed, which is equal to net working capital plus net fixed assets. So while the approach uses just two variables, those variables encompass quite a bit and provide a pretty well-rounded look at a stock.

The Greenblatt-based Value & Quality model utilizes 2 fundamental factors and ranks stocks based on the combination of both factors

Source: *The Little Book That Beats the Market*

- **Earnings yield**: Ranks all stocks by earnings yield
- **Return on total capital**: Ranks all stocks by return on total capital.
- **Final ranking**: The final step is to combine the earnings yield and return on capital rankings for an overall ranking.

The Joseph Piotroski-based Small-Cap Value Model: This little-known accounting professor wrote a highly influential paper that laid out an accounting-based value investing method that was back-tested over a multi-decade period to prove its validity. The strategy starts by looking for stocks trading in the top 20% of the market based on their book/market ratios (or, conversely, the cheapest 20% of the market based on price/book ratios). Then, it applies a series of additional tests of financial strength to separate the high book/market firms that are dogs from those that are good prospects. Return on assets, current ratio, cash flow from operations, change in gross margin, and long-term debt/assets are all among the variables it examines.

The Piotroski-based value model utilizes 10 fundamental factors. Model looks for high-Book/Market stocks that pass numerous accounting tests

Source: *Value Investing: The Use of Historical Financial Statement Information to Separate Winners from Losers*

- **Book/market ratio**: Model requires company be in the top 20% of the market based on the Book/Market ratio
- **Return on assets**: Return on assets (ROA) for the most recent fiscal year must be positive.
- **Change in return on assets**: ROA for the most recent year must be greater than the ROA last year.
- **Cash flow from operations**: Cash flow from operations for the most recent fiscal year must also be positive.
- **Cash compared to net income**: Cash from operations for the most recent fiscal year must be greater than net income.
- **Change in long-term debt/assets**: Long-term debt/assets ratio for the most recent fiscal year must be less than it was the previous year.
- **Change in current ratio**: Current ratio in most recent fiscal year must be greater than it was the previous year
- **Change in shares outstanding**: Shares outstanding for the most recent fiscal year must be less than or equal to shares outstanding for the previous year.
- **Change in gross margin**: Gross margin for the most recent fiscal year must be greater it was the previous year.
- **Change in asset turnover**: Asset turnover for the most recent fiscal year must be greater than it was the previous year.

Bringing It All Together In One Tool

Validea's Stock Research suite offers professionals a unique set of stock analysis and investment idea generation tools based on proven fundamental strategies of investing greats. Some professionals may utilize the tools as a way to validate a new or existing investment from a fundamental standpoint, while others may seek out new investment ideas using the stock screener, model portfolio or high conviction trade alerts. For investors who believe fundamentals matter, who admire great investors like Buffett and Lynch and who are looking for a competitive and differentiating edge in today's market, Validea could be an excellent investment research add-on.