

## Stock Picking

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It is a commonly held misconception that all value investors do is sort stocks by P/E (or P/B) and invest in those with low P/E (P/B). But considering low P/E (P/B) stocks is only part of the value investing process. This is because, on average, about 39% of all low P/E (P/B) stocks have a negative return for the 12 months following their selection [1]. How do value investors separate the good low P/E (P/B) stocks from the bad ones? They do so by valuing each low P/E (P/B) stock to determine its intrinsic value and only invest in the stocks that afford them a satisfactory “margin of safety” - these are the good low P/E (P/B) stocks.

Athanassakos [2] followed this process in the first academic paper to do so. He examined whether value investors (following the right process) add value over and above a simple rule that dictates they invest only in stocks with low P/E (P/B) ratios. Using Canadian data, he found that value investors do add value, in the sense that their process of selecting truly undervalued stocks produced significantly positive excess returns over and above the naive approach of simply selecting stocks with low P/E and P/B ratios. The average annual outperformance between 1985 and 1998 was 1.10 per cent, while between 1999 and 2007 was 13.20 per cent.

But this is not easy to do for the average investor and, even for professionals, it is a very time consuming exercise. Is it possible to identify the good low P/E (P/B) stocks (i.e., the truly undervalued or quality stocks) without having to go through the time consuming estimation of each stock's intrinsic value? Is there an additional screening, after the low P/E (P/B) stocks have been chosen, which will enable an investor to identify the low P/E (P/B) stocks worth investing in without having to go through the time consuming estimation of each stock's intrinsic value?

Here are a few approaches that have been developed to deal with this question.

Athanassakos [1] has researched this question in the US markets using COMPUSTAT data for the period May 1, 1969 to April 30, 2011. He removed the time-consuming step of valuing each stock individually by assigning a SCORE to each stock that is based on publicly available financial ratios from historical company information.

He excluded from his data AMEX companies, high business risk companies, such as Software & Services, Semiconductors & Semiconductor Equipment, Transportation, Automobiles & Components, Real Estate/Construction Materials and Pharmaceuticals, Biotechnology & Life Sciences Capital Goods, and companies that had reported extraordinary items the year before. Those stocks were excluded as he found that they tended to have low returns over his sample period. He also excluded negative P/E stocks, stocks with P/E over 500 and stocks that traded for less than \$1. His final sample included 78,752 annual observations belonging to 7,353 unique companies.

Each year at the end of April, Athanassakos [1] sorted the stocks in his sample by trailing P/E ratios from low to high and formed quartiles. Value stocks are those that fall in the lowest quartile. A SCORE for each value stock was then assigned based on six historical variables: market cap, stock liquidity (i.e., annual trading volume/shares), asset turnover

(i.e., assets/revenues), total debt to equity, cash to assets and year-over-year EBIT annual growth rate, one variable at a time. The overall SCORE was derived by assigning a value of 1 (for good ranking) or the value of zero (for bad ranking) to each of the 6 firm-specific variables and summing up the zero or one values for each firm. He finally formed seven portfolios of firms with SCOREs from low (portfolio 0) to high (portfolio 6) and calculated each SCORE portfolio's mean and median annual returns from May 1, 1969 to April 30, 2011. He found that value firms with the highest SCORE had a mean annual return of 54.38%. The lowest SCORE value firms had a mean annual return of 13.32%. Median annual returns were consistent with the mean values. For comparison, the mean annual return for all value stocks in his sample was 22.36%.

Athanassakos [3] examined Canadian non-interlisted companies that traded on Canadian Stock Exchanges from May 1, 1985 to April 30, 2009 also employing COMPUSTAT data. He zeroed in on non-interlisted Canadian stocks as a test of the robustness of Athanassakos' [1] approach since these stocks are very different from the stocks examined in the US study in terms of size, liquidity and visibility. He used the same methodology as the one followed for the US markets. The Canadian non-interlisted sample contained 7,145 annual observations belonging to 1,237 unique companies. He found that the highest SCORE portfolio had a mean annual return of 36.89%, whereas the lowest SCORE portfolio had a mean annual return of -11.35%. The median annual returns were consistent with the mean values. For comparison, the mean annual return for all value stocks in his sample was 16.86%.

Others have followed similar approaches to identify quality or outperforming low P/E (P/B) stocks. Greenblatt [4] develops a “magic formula” that uses return on capital (ROC) (namely, EBIT/Tangible Capital) as a key metric to select quality value stocks. He ranks value firms (i.e., low P/E firms) by ROC and buys only stocks with high return on capital.

Piotroski [5] uses a SCORE to separate the good from the bad value stocks. His SCORE consists of 9 variables that take the value 0 (bad signal) or 1 (good signal). His variables capture profitability (positive earnings, positive cash flows from operations, increasing return on assets and negative accruals), operating efficiency (increasing gross margins and asset turnover) and liquidity (decreasing debt, increasing current ratio, and no equity issuance). The SCORE for a stock is the sum of the 0 or 1 values for all firm-specific variables.

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Graham [6] uses another SCORE related approach to identify quality value stocks. A good SCORE (i.e., value of 1) is assigned, if current ratio exceeds 2, or net current assets exceed long term debt, or ten year history of positive earnings, or ten year history of returning cash to shareholders or EPS that are at least a third higher than they were 10 years ago. Otherwise, the SCORE is zero. The SCORE assigned to a stock is then the sum of all 0 or 1 values.

Finally, Novy-Marx [7] uses a simple measure for quality, namely gross profits to assets (GPA), and focuses on those value stocks that have a high GPA.

For all markets examined, irrespective of the approach followed to identify truly undervalued stocks, it was possible to separate winning from losing value stocks when stock selection took place by focusing on high SCORE or quality value stocks. Consequently, an additional screening (based on a SCORE or quality indicator) to the first screening of the value investing process (i.e., only looking at low P/E (P/B) stocks) adds considerable value to an investment strategy and makes stock picking simpler, easy to standardize and, hence, faster.

## References

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