BRAC BUSINESS SCHOOL

January, 2020

BBS Capital Market Research

Does Value Investment Strategy Work in Dhaka Stock Exchange?

Short answer is, it does! But is it really that simple?
Or is there a catch to it?

Research & Professional Development Centers (RPDCs)

BRAC Business School

What is the rationale behind stock market investors investing in particular stocks? One simple answer could be to exploit the profit opportunities existing in the market. These opportunities may come with or without clear signals. Even if there is a market signal, it's difficult to take the opportunity on time unless an investor is a full-time professional and watching the market movements on regular intervals. One easy way to identify the profit opportunities for an amateur investor would be focusing on market anomalies that have widely been documented previously in advanced capital markets.

Anomalies are empirical results that seem to be inconsistent with maintained theories of asset-pricing behavior (Schwert, 2002). The sources of anomalies can be found, in general, from the size effect, the value effect, the weekend effect and the dividend yield effect. Some of these effects can be weakened or dissolved once the anomalous effects have been documented. However, a developing stock market such as Dhaka Stock Exchange may still exhibit some of these anomalous effects, especially the value effect, due to the lack of information and liquidity.

The value effect represents empirical results of positive abnormal returns from firms with high earnings-to-price (E/P) ratios, high book-to-market (B/M) values, or high dividend yields. The most academically and professionally documented effect would be the abnormal return due to the difference in E/P ratio, or more commonly an inverse form of it, the P/E ratio. P/E ratio is a ratio between price-per-share and earnings-per-share (EPS).

Stocks are commonly grouped between growth stocks (high P/E stocks) and value stocks (low P/E stocks). Empirical evidences show that the low P/E stocks generally produce higher investment returns than high P/E stocks (Basu, 1977). This multiple is a widely available information and assessed constantly by investors, broker-dealers, and corporate financial executives for valuation of a target investment. Since market participants can easily acquire the target company's P/E ratio, the positive abnormal return associated with the low P/E should be arbitraged away before a general investor can take the profit opportunity. However, the empirical studies in many countries over different time periods show that the profit opportunity still exists for investing in value stocks.

Based on this information, this report investigates whether the potential profit opportunity exists in Dhaka Stock Exchange by investing in a portfolio of low P/E stocks.

When the earnings expectations are available in the market, analysts normally use the forward EPS as a value driver to mitigate the effects of transitory low earnings and, therefore, the effects of an unusually high P/E ratio. Given the fact that the information on forward EPS is not readily available for general investors, the trailing EPS at the end of the accounting period of 2019 (June 2019) has been used to calculate the P/E ratio of each firm. The stock price used is an average of daily prices from April 1 until June 30, 2019.

A pool of 48 relatively larger firms with the accounting period ending in June 2019 have been collected for analysis. From this pool, those firms with negative EPS, negative EBIT or EBITDA are excluded to result a final sample of 41 firms. These firms are grouped into four portfolios according to the size of their P/E ratios. The following table shows a general description of these four portfolios.

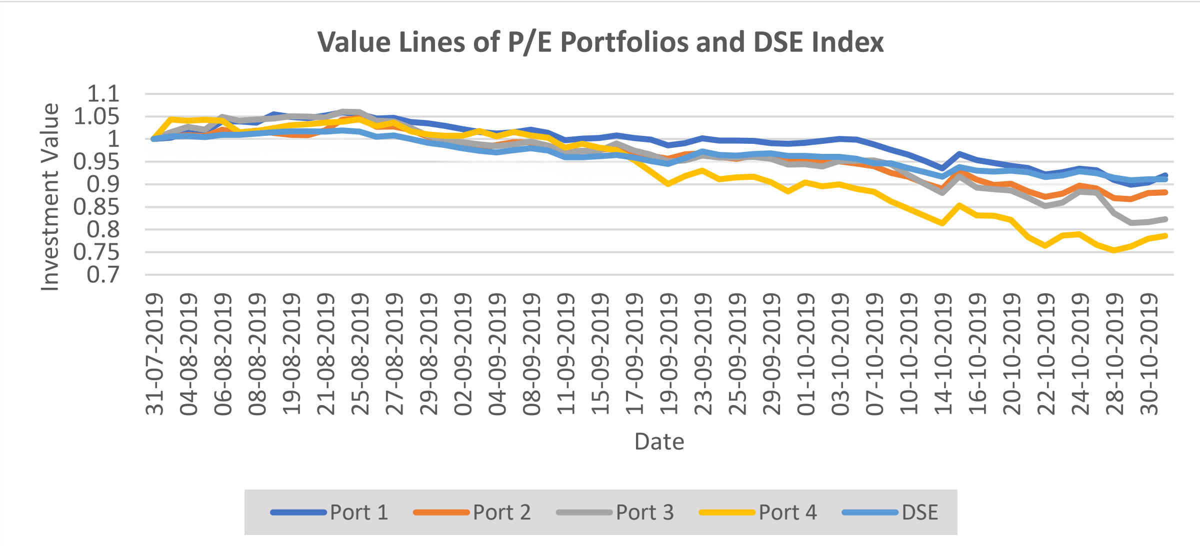
P/E Portfolios (June 2019)

Portfolio	Number of Firms	P/E Range	Average P/E	Average P/B	Average P/S	Average Capitalization (billion taka)
Port 1	10	7.14 - 14.2	11.03	1.12	1.58	20.7
Port 2	10	16.64 - 24.91	20.66	2.07	3.98	36.8
Port 3	11	25.76 - 42.43	34.19	2.41	4.46	9.3
Port 4	10	49.27 - 141.51	79.11	3.59	2.06	2.11

The table depicts that the relatively smaller firms in terms of equity capital are clustered in the higher P/E portfolios since the average capitalizations in the portfolios 3 and 4 are substantially lower than those of portfolios 1 and 2. The average P/B (price-per-share to book value-per-share) and average P/S (price-per-share to sales-per-share) follow the rankings of P/E as well, except the lower P/S shown for portfolio 4.

Once the portfolios are created, average portfolio returns are calculated from August 1, 2019 since an individual investor may be able to access the latest accounting information with certain lags. Afterwards, an analysis is performed on how these portfolios have accumulated values over time for the next three months until the end of October. Applying different time horizon produces similar result. However, a longer investment horizon until the end of December shows mixed value cycles of these portfolios. It could be due to compounding effects of dividend and the end of year seasonal effect. In fact, a quarter period is a sufficient time for market conditions to change and new values may reflect factors unrelated to the P/E effect. The following graph shows the performance results of these portfolios.

The graph is created assuming one-taka investment in different portfolios including a passive investment in Dhaka Stock Exchange Index on July 31, 2019. It shows how the investment values have accumulated over the next three months until October 31, 2019.



The graph indicates that:

(1) The Dhaka stock market was in downtrend during the second half of 2019,
(2) The ending value of the market index (light blue) or passive investment return shows a comparable performance (0.91 on October 31) compared to the ending value of an active investment portfolio of lowest P/E ratios (0.92 on October 31),
(3) The ranks in ending value are opposite to the ranks of beginning P/E ratios. The portfolio 4 (highest P/E firms) performed the poorest (0.79 on October 31) while the portfolio 1 (lowest P/E firms) showed the highest ending value, followed by the portfolio 2 (0.88) and 3 (0.82), subsequently. The value investment principle (investing in low P/E stocks) may work, producing higher return in upmarket and defending value in down market, in Dhaka Stock Exchange, and
(4) The value of the highest P/E portfolio dropped substantially (-10%) after one and a half month's investment from the portfolio formation, while it maintained the highest value among four portfolios for less than one-week period at the beginning. The optimum investment horizon for high P/E stocks (growth stocks) following the price momentum may be short, possibly less than a week.

Based on the casual observations of the value trends of these portfolios, the "value" effect still produces anomalous returns for low P/E stocks in Dhaka Stock Exchange. The analysis on other years produced similar results. It implies that an individual investor with limited professional information on the market may utilize this anomalous effect for finding profit opportunities if his/her investment horizon is at least two months. P/E ratio is the most widely available information in the market and easily accessible for a general investor and investing in a low P/E portfolio could be a relatively simple and good investment strategy for an investor to try.

For inquiries, please contact BBS Research and Professional Development Centers, Capital Market Research Center (email: Daniel.mahbub@bracu.ac.bd)

References

G. William Schwert, 2002, "Anomalies and Market Efficiency," Working Paper 9277, *NBER Working Paper Series,* National Bureau of Economic Research

S. Basu, 1977, "Investment Performance of Common Stocks in Relation to Their Price-Earnings Ratios: A Test of the Efficient Market Hypothesis," *The Journal of Finance*, Vol. 32, No. 3, pp. 663-682