



Variations on a Theme: Price to Earnings Ratio - April 30, 1997

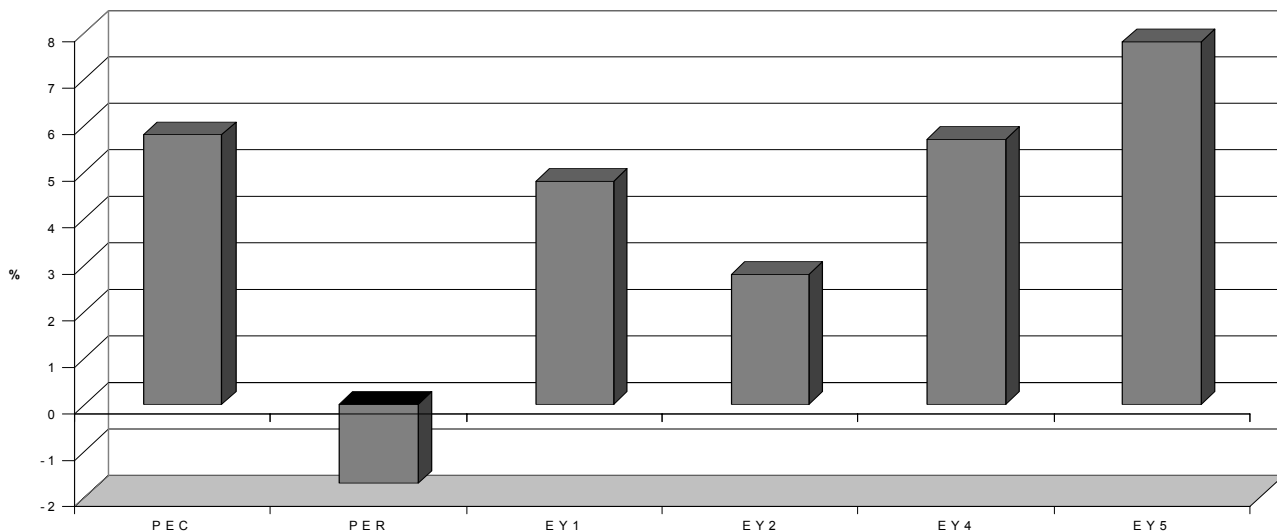
It is commonly known that stocks with low price/earnings ratios perform better, on average, than high P/E stocks. However, which P/E ratio one uses could significantly affect performance results. Does one use reported, normalized or operating earnings per share or expected earnings in calculating P/E? This study compares the results over the past 20 years of using each of these approaches.

In order to compare similar groups of stocks, earnings yield (E/P) is substituted for P/E. Using E/P allows us to include companies with negative earnings per share. In this analysis, companies with negative EPS are included in the worst decile. For this study we used 2 variables Ford currently computes, PEC (P/E based on current earnings) and PER (P/E based on normal earnings). We also computed four additional variables, EY1, EY2, EY4 and EY5 which incorporate the upcoming fiscal year estimate (MN1 from IBES), next fiscal year estimate (MN2 from IBES), current operating earnings (EQ4) and estimated 12-month operating earnings one quarter ahead (EQ5), respectively. These variables were divided into quarterly rebalanced deciles with the best (low P/E or high earnings yield) stocks in decile 1. Performance for these deciles was computed for the 20-year period ending December 1996 and for 5-year intermediate periods.

Results

All of the variables except for PER showed positive returns in the top decile versus the Ford universe for the 20-year period. PER was hurt by poor results in the third 5-year period (12/86-12/91). Indeed, the third 5-year period of this study was particularly weak for following a low P/E strategy based on any of the tested variables. EY5 was the only variable tested in which the top decile outperformed the Ford universe in each of the 5-year subperiods. However, during the most recent 5-year period PER has shown the best performance of the variables tested.

Top Decile Annualized Excess Returns 12/76-12/96



Conclusions

Employing a strategy of buying the stocks in the top decile of EY5 over the past 20 years would have resulted in outperforming the next best strategy (buying the best PEC stocks) by 2 percentage points annually. However, if you had employed the same strategy over just the last 5 years, you would have underperformed the best strategy over that time frame (buying the best PER stocks) by about 2 percentage points. This exhibits the non-stationary nature of the effect of using these variables over time. Overall, using the EY5 variable was the most effective because of its relative performance in the third 5-year period and its large excess returns in the first half of the study. The superior performance of EY5 is possibly due to the emphasis placed by investors on near term earnings expectations rather than historical earnings or longer-term estimates. This is further borne out by the fact that EY1 performance was better than EY2 performance.

PEC

Annualized Returns	1	2	3	4	5	6	7	8	9	10	ALL
12/76-12/81	27.7	23.7	19.7	20.6	15.3	12.0	12.0	11.1	12.6	14.5	17.0
12/81-12/86	27.0	27.9	25.3	24.3	23.8	18.6	17.9	15.0	13.1	11.3	20.6
12/86-12/91	11.2	16.4	14.9	12.4	13.3	12.8	11.3	12.4	5.4	-3.7	10.8
12/91-12/96	23.4	18.3	16.2	14.7	15.1	15.4	13.0	13.2	20.8	18.6	17.0
12/76-12/96	22.1	21.5	19.0	17.9	16.8	14.7	13.5	12.9	12.8	9.9	16.3

PER

Annualized Returns	1	2	3	4	5	6	7	8	9	10	ALL
12/76-12/81	21.5	23.2	21.3	19.8	18.6	14.5	12.4	10.8	13.1	13.3	17.0
12/81-12/86	18.2	24.2	23.9	25.3	20.8	20.7	21.3	19.2	17.5	13.5	20.6
12/86-12/91	-5.2	11.4	10.3	11.8	15.8	11.7	10.8	13.1	11.3	15.5	10.8
12/91-12/96	26.9	21.6	19.1	18.4	16.5	14.9	14.4	14.7	12.7	9.5	17.0
12/76-12/96	14.6	20.0	18.5	18.7	17.9	15.4	14.7	14.4	13.6	12.9	16.3

EY1 (earnings yield based on upcoming fiscal year end estimate)

Annualized Returns	1	2	3	4	5	6	7	8	9	10	ALL
12/76-12/81	24.2	21.4	18.7	18.5	14.2	10.2	9.6	11.4	11.3	7.6	17.0
12/81-12/86	27.3	29.2	25.3	22.6	24.1	20.8	16.8	17.8	13.8	9.5	20.6
12/86-12/91	10.8	16.1	16.6	12.5	11.5	11.9	13.9	13.0	9.9	0.9	10.8
12/91-12/96	22.9	21.2	16.1	17.9	14.5	16.2	14.9	12.0	9.9	17.3	17.0
12/76-12/96	21.1	21.9	19.1	17.8	16.0	14.7	13.8	13.5	11.2	8.7	16.3

EY2 (earnings yield based on second fiscal year end estimate)

Annualized Returns	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>ALL</u>
12/76-12/81	20.1	17.7	15.9	15.2	14.9	11.5	9.6	8.9	10.1	9.6	17.0
12/81-12/86	24.7	28.3	25.4	22.7	21.3	22.2	18.1	17.6	17.6	8.9	20.6
12/86-12/91	10.0	13.3	14.6	17.0	10.9	10.5	13.7	13.3	12.4	8.6	10.8
12/91-12/96	22.3	22.3	18.5	18.4	15.4	15.2	14.2	9.5	10.4	14.2	17.0
12/76-12/96	19.1	20.3	18.5	18.3	15.6	14.7	13.9	12.3	12.6	10.3	16.3

EY4 (earnings yield based on trailing 12 month operating earnings)

Annualized Returns	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>ALL</u>
12/76-12/81	28.2	23.2	20.7	20.1	15.5	11.2	12.9	11.9	12.3	13.4	17.0
12/81-12/86	27.5	28.2	24.1	24.6	24.5	20.3	19.1	13.4	13.3	9.4	20.6
12/86-12/91	9.4	16.4	15.2	13.9	11.1	13.4	12.1	12.2	8.4	-5.5	10.8
12/91-12/96	23.8	19.1	15.5	15.4	15.2	16.7	12.6	13.3	15.8	21.0	17.0
12/76-12/96	22.0	21.6	18.8	18.4	16.5	15.4	14.1	12.7	12.4	9.1	16.3

EY5 (earnings yield based on expected operating earnings one quarter ahead)

Annualized Returns	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>ALL</u>
12/76-12/81	31.2	25.3	21.4	18.3	16.5	13.7	10.3	12.3	10.5	10.2	17.0
12/81-12/86	29.3	27.6	26.9	25.1	23.2	20.5	18.1	14.4	12.2	7.6	20.6
12/86-12/91	12.0	17.0	15.7	13.2	13.6	13.0	12.0	12.1	5.2	-7.1	10.8
12/91-12/96	24.8	19.9	16.7	15.9	15.2	15.6	13.6	12.2	15.1	19.4	17.0
12/76-12/96	24.1	22.4	20.1	18.0	17.0	15.7	13.5	12.7	10.7	7.1	16.3