# Top 5 <br> <br> Valuation <br> <br> Valuation <br> Secrets 

How to quickly spot
the best stocks
for making money!


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## Winning Value Strategies

## Statistical Analysis of P/CF, P/E, P/S, P/B, and PEG

Since this chapter is all about Value style screens, it seemed like the perfect place to expound on some of the statistical analysis I've done on the aforementioned valuation metrics, specifically: the Price to Earnings ratio (P/E), Price to Sales ratio (P/S), Price to Book ratio (P/B), Price to Cash Flow ratio (P/CF), and the PEG ratio (PEG).

I tend to do a lot of relative comparisons for finding value, knowing that different groups have different characteristics. Even the broader market's perception of what is normal can change in a meaningful way at different times, so making relative comparisons always keeps a person's screening techniques current and up-to-date (not to mention profitable).

But there's a time for using hard and fast values as well. And understanding what works and what doesn't and where the advantages reside can really help someone supercharge their trading.

## The Test

In March 2010, I did a study on five of the most commonly used valuation items. (Don't feel bad if your favorite one isn't on the list. You can easily conduct a similar study on your own.) For the study, I did a 10 -year test (2/2000-2/2010). I created a base screen that consisted of stocks trading $>=$ $\$ 1$, with an average 20 -day share volume $>=100,000$. I then added the item of interest to the screen and applied various value ranges. My findings follow.

But before we get into the results for the items themselves, let's take a look at our controls to better understand the performances that we'll be looking at.

Over the last 10 years, using a one-week holding period, the base screen produced an average compounded annual growth rate of $7.4 \%$. Each stock in this portfolio was equally weighted. And so they are for the following studies.

## Price to Cash Flow (P/CF)

Let's begin with the Price to Cash Flow (P/CF) since we just got done talking about that. The chart and list that follow displays the compounded growth rates for the different test ranges (see Figure 9.6).

FIGURE 9.6 Price to Cash Flow (P/CF) Study


P/CF range $>=0$ and $<=10$ : Average Annual Return: 17.7\%
P/CF range $>10$ and $<=20$ : Average Annual Return: 10.2\%
P/CF range $>20$ and $<=30$ : Average Annual Return: 3.2\%
P/CF range $>30$ and $<=40$ : Average Annual Return: $-2.8 \%$
P/CF range $>40$ : Average Annual Return: -6.9\%

The best performing range was $0-10$ with a $17.7 \%$ annual return. The $10-20$ range came in with $10.2 \%$. Interestingly, there were about the same number of stocks in each of these two groups, although a tad more in the first one (average of 988 for group 1 and 867 for group 2).

So the statistical advantage resides in the first range ( $0-10$ ), which also happens to be under the median P/CF value for the stocks in the S\&P (10.37 as of August 2010). Staying in this range gives the trader his best odds for success in regard to this item.

I also did one more study and that was to apply the Zacks Rank \#1 to the top performing set. (See the leftmost bar in the chart of Figure 9.7 for illustration.)

FIGURE 9.7 Price to Cash Flow (P/CF) Study and Zacks Rank \#1
P/CF Study 10 Years (2/2000-2/2010)


P/CF range 0-10 and Zacks Rank 1: Average Annual Return: 34.7\%

## Price to Earnings (P/E)

Next up is the Price to Earnings ratio (P/E). For this study, I used the P/E using the $\mathrm{F}(1)$ Estimates.

In the chart and list that follow, you'll see the compounded annual growth rates for the different $\mathrm{P} / \mathrm{E}$ ranges (see Figure 9.8).

It's clear from this study that the lower $\mathrm{P} / \mathrm{E}$ ratios did better than the higher ones with ranges $0-10$ and $10-20$ performing the best. By the time I got to the last few ranges in the study, the gains became almost nonexistent before finally tipping over into a loss.

FIGURE 9.8 Price to Earnings (P/E) Study
P/E Study 10 Years (2/2000-2/2010)


P/E range $0>=$ and $<=10$ : Average Annual Return: 21.5\%
P/E range $>10$ and $<=20$ : Average Annual Return: $14.7 \%$
P/E range $>20$ and $<=30$ : Average Annual Return: 7.1\%
P/E range $>30$ and $<=40$ : Average Annual Return: 3.4\%
P/E range $>40$ and $<=50$ : Average Annual Return: $0.2 \%$
$\mathrm{P} / \mathrm{E}$ range $>50$ : Average Annual Return: -5.9\%
Even though the first range of $0-10$ produced superior results, it had less than a third of the stocks that the second range of $10-20$ had (avg. 305 vs . $1,095)$. So knowing that, it'd be prudent to expand one's optimum range to encompass both groups, thus ensuring that once you start layering on additional filters, you have enough stocks to choose from. If the active universe of beginning candidates is too small, you may find it harder to find enough of the stocks you're looking for.

By combining both ranges that would include P/Es of between 0 and 20 , you now get an average annual return of $16.9 \%$ and a more meaningful list of stocks to pick from.

Does this mean that you should never buy a stock with a P/E above 20? Or above 50 because that showed a loss? Of course it doesn't. There are plenty of stocks that have done great above those levels and will do great above those levels. But in general, everything being equal, the advantage clearly lies with the lower numbers and more specifically, within those respective ranges.

Now let's see what that range of $0-20$ looks like in comparison to the other ranges and also see how that optimum range performs with the Zacks Rank \#1 added to it. (See Figure 9.9.)

FIGURE 9.9 Price to Earnings (P/E) Study and Zacks Rank \#1
P/E Study 10 Years (2/2000-2/2010)


P/E range 0-20 and Zacks Rank 1: Average Annual Return: 26.2\%

## Price to Sales ( $\mathbf{P} / \mathbf{S}$ )

Let's do the Price to Sales ratio (P/S) next. See the compounded annual growth rates for the different $\mathrm{P} / \mathrm{S}$ ranges in the chart and list that follows (see Figure 9.10).

FIGURE 9.10 Price to Sales (P/S) Study
P/S Study 10 Years (2/2000-2/2010)

$\mathrm{P} / \mathrm{S}$ range $>=0$ and $<=1$ : Average Annual Return: 17.8\%
$\mathrm{P} / \mathrm{S}$ range $>1$ and $<=2$ : Average Annual Return: $11.1 \%$
$\mathrm{P} / \mathrm{S}$ range $>2$ and $<=3$ : Average Annual Return: 7.3\%
$\mathrm{P} / \mathrm{S}$ range $>3$ and $<=4$ : Average Annual Return: 3.8\%
$\mathrm{P} / \mathrm{S}$ range $>4$ : $\quad$ Average Annual Return: - $7.9 \%$

From the preceding study, you can see that the best range was $0-1$. The second range of $1-2$ did fine enough, producing a return of 1.5 times the base group of $7.4 \%$. But the first range was the clear winner at 2.4 times the control.

The last range in the study (>4) is firmly in negative territory presenting the worst odds of success. What about the winning range plus the Zacks Rank \#1? Even better. (See Figure 9.11.)

FIGURE 9.11 Price to Sales (P/S) Study and Zacks Rank \#1
P/S Study 10 Years (2/2000-2/2010)


P/S range 0-1 and Zacks Rank 1: Average Annual Return: 33.9\%

## Price to Book (P/B)

Next up is the Price to Book ratio (P/B). See the corresponding chart and list that follow for the compounded annual growth rates for the different ranges (see Figure 9.12).

The first two ranges ( $0-1$ ) and ( $1-2$ ) were virtually identical. The only real difference was in the number of stocks it generated (average of 315 for the first set and 831 for the second). While I was a little surprised at how similar the results were, I was not at all surprised to see that these two ranges were the best performers. With the median $\mathrm{P} / \mathrm{B}$ ratio for the stocks in the S\&P 500 at just over 2 ( 2.12 as of Aug. 2010), staying under this mark makes sense.

Performance in each subsequent range seems to get cut in half as you go down the list before finally turning negative with a $\mathrm{P} / \mathrm{B}$ ratio over 5 .

FIGURE 9.12 Price to Book (P/B) Study
P/B Study 10 Years (2/2000-2/2010)

$P / B$ range $>=0$ and $<=1$ : Average Annual Return: $12.6 \%$
$P / B$ range $>1$ and $<=2$ : Average Annual Return: 12.9\%
$P / B$ range $>2$ and $<=3$ : Average Annual Return: $8.3 \%$
$P / B$ range $>3$ and $<=4$ : Average Annual Return: 4.2\%
$P / B$ range $>4$ and $<=5$ : Average Annual Return: $0.8 \%$
$P / B$ range $>5$ : $\quad$ Average Annual Return: - $2.7 \%$
Let's create one more study set by combining the top two ranges with the Zacks Rank \#1 stocks added to it. (See Figure 9.13.)

FIGURE 9.13 Price to Book (PB) Study and Zacks Rank \#1 P/B Study 10 Years (2/2000-2/2010)


P/B range 0-2 and Zacks Rank 1: Average Annual Return: 31.3\%

## PEG Ratio (PEG)

Last but not least is the PEG ratio. See the chart and list that follows for the performances of the different values (see Figure 9.14).

FIGURE 9.14 PEG Study
PEG Study 10 Years (2/2000-2/2010)


PEG range $>=0$ and $<=1$ : Average Annual Return: 18.2\%
PEG range $>1$ and <= 2: Average Annual Return: 8.0\%
PEG range $>2$ and $<=3$ : Average Annual Return: $1.7 \%$
PEG range $>3$ and $<=4$ : Average Annual Return: $0.7 \%$
PEG range $>4$ and $<=5$ : Average Annual Return: $-2.4 \%$
PEG range > 5: Average Annual Return: - $2.7 \%$

Range $0-1$ was the clear winner with an $18.2 \%$ annual return. I must say I was a little surprised that we had to get all the way up to the $4-5$ range before we started seeing losses. For all intents and purposes, once you go above 2 , the odds of success were no longer in your favor. Once again, that does not mean that stocks with PEG ratios higher than 2, or even 5 for that matter, are bad. It just means, statistically, you have the best odds staying under 1.

Of course, nobody should use any item in a vacuum. There are plenty of other things that matter as well, not the least of which are their earnings estimate revisions and growth rates and more. But again, when choosing between two similar stocks with similar fundamentals, I'll usually give the nod to the one with the lower valuations because of what I know here.

And like we did with the others, let's see what the results look like if we added the Zacks Rank \#1 stocks to the top performing PEG range. (See Figure 9.15.)

FIGURE 9.15 PEG Study and Zacks Rank \#1
PEG Study 10 Years (2/2000-2/2010)


PEG range 0-1 and Zacks Rank 1: Average Annual Return: 26.0\%

