Back to the Basics
Section 4 of the SSG
P/Es – PEGs – High & Low Prices

Crow River Investment Club
Presented by Lynn Ostrem
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Putting this in perspective:

Awhile back, someone posted the following on the Manifest forum:

NAIC tells us that 80% of what we need to know to be a successful investor is on the SSG. If that's true, does Manifest provide closer to 100% of what we need to know?

Jim Thomas responds…

Whether you are looking at PAR on the SSG or PAR on the Dashboard, we're never going to be able to accurately gauge returns in 5 years from now…

COACH INC	0.0	1.91

19.8	21.5	111.0

Company	Symbol
Coach Inc.	COH

Qlty	PAR
93.8	20.3%

Jim Thomas from the Puget Sound chapter answered: "Whether you are looking at PAR on the SSG or PAR on the Dashboard, we're never going to be able to accurately gauge returns in 5 years from now. These are nothing more than convenient methods of ranking stocks by their potential for producing returns. If your SSG PAR ends up being close to the Manifest PAR, does it really matter what the specific number is? Does it matter which method was used?

If my estimates come close to a 20% return, I don't actually expect to get 20% if I invest in that stock and hold it for 5 years. What I do expect is that, more often than not, I'll get a "better" return by investing in that stock than if I invest in a stock with an estimated 15% (or 10%) return. I'm interested in Manifest and the SSG because they should tend to steer me towards investing in stocks that will likely produce higher returns, and away from stocks that are likely to produce slower returns."

Guessing?

This shows how stock prices have fluctuated with earnings and dividends. It is a building block for translating earnings into future stock prices.

PRESENT PRICE 27.760 HIGH THIS YEAR 35.740 LOW THIS YEAR 26.080

	Year	A PRICE HIGH	B PRICE LOW	C Earnings Per Share	D Price Earnings Ratio HIGH A ÷ C	E Price Earnings Ratio LOW B ÷ C	F Dividend Per Share	G % Payout F ÷ C X 100	H % High Yield F ÷ B X 100
1	2002	24.1	16.8	0.93	25.9	18.1	0.050	5.4	0.3
2	2003	30.0	17.0	1.16	25.9	14.7	0.060	5.2	0.4
3	2004	30.1	23.2	1.36	22.1	17.1	0.080	5.9	0.3
4	2005	34.7	25.8	1.73	20.1	14.9	0.080	4.6	0.3
5	2006	34.7	26.4	1.99	17.4	13.3	0.160	8.0	0.6
6	TOTAL		109.2		111.4	78.1		29.1	
7	AVERAGE		21.8		22.3	15.6		5.8	
8	AVERAGE PRICE EARNINGS RATIO	18.9		9	CURRENT PRICE EARNINGS RATIO	14.3			

Proj. P/E [13.03] Based on Next 4 qtr. EPS [2.13] Current P/E Based on Last 4 qtr. EPS [1.94]

PEG=132

4 EVALUATING RISK and RE[illegible]RD over the next 5 years

Assuming one recession and one business b[illegible]om every 5 yea[illegible] calculations are made of how high and how low the stock might sell. The upside-downside ratio is the key to evaluating [illegible]k and reward.

A HIGH PRICE -- NEXT 5 YEARS

Avg. High P/E ~~22.3~~ 21.0 X Estimate High Earnings/Share 3.10 = Forecast High Price $ 65.1 (4A1)

B LOW PRICE -- NEXT 5 YEARS

(a) Avg. Low P/E ~~15.6~~ 13.0 X Estimated Low Earnings/Share ~~1.99~~ 1.94 = $ 25.2

(b) Avg. Low Price of Last 5 [illegible]ears = 21.8 (3B7)

(c) Recent Severe Market Low Pr[illegible]e = 25.8

(d) Price Dividend Will Support Present Divd. / High Yield (H) = 0.320 / 0.006 = 52.8

Selected Estimate Low Price = $ 25.2

NAIC theory leads us to spend a great deal of time trying to disseminate numbers (P/E ratios, high and low price in 5 years, etc.) that are simply not able to be measured accurately. We need to be able to differentiate what we know we can reasonably estimate and what we can't, and let the pros help us with the latter.

For this reason, our club puts more emphasis on analysts' consensus estimates (or ACE) than we used to, simply because we've learned that market prices are heavily influenced by the perception of the future. And, like it or not, the big institutions move the markets.

What's Reasonable?

- What is a reasonable P/E ratio?
- What is an "excessive" P/E ratio?

Starbucks P/E 31

Cablevision P/E 30

Google P/E 35

Genentech P/E 27

Ralph Seger tells us, "There tends to be a relationship between P/E ratios and EPS growth rates. This relationship is affected by what institutional investors are willing to pay for earnings.

He goes on to say, "So! What is a reasonable P/E ratio? What is an "excessive" P/E ratio? These are questions which many people disagree about. Typically, the P/E ratio of larger stocks that are favored by institutional investors frequently sport P/E ratios that are more generous than lesser known issues. These P/E ratios have built into them an expectation of future favorable results. It is when such results fall short of expectations that the price and P/E ratio of the stock takes a tumble."

Sleep at Night Projections

- Most people are taught to be conservative
- Cut back on lofty projections
- 20% isn't a sustainable, long-term growth rate
- Draw lines based on your ability to sleep at night

When learning how to use the SSG, most people are taught to be conservative. Even if the top line has grown at 20% per year, most instructors will urge people to cut back on their projections. Implicit in this behavior is the idea that things ultimately revert to the mean—and 20% isn't a sustainable, long-term growth rate. Since we don't know when this reversion will take place, we may as well be conservative and prepare ourselves if it happens tomorrow!”

It’s a valid exercise to draw lines based on your ability to sleep at night, and not to rely on growth above a certain level, or P/E's above a certain level. At the same time, it's important to realize that others are not "wrong" to have more aggressive judgments.

Make Room for P/E Expansion

- Ralph Seger says that, "The lower the opportunity for P/E ratio expansion, the lower the opportunity for a price rise. If you can buy a stock at a P/E ratio at or somewhat below your judgment as to what is an appropriate average P/E ratio, the odds for a significant price appreciation increase."

Ralph Seger says that, "The lower the opportunity for P/E ratio expansion, the lower the opportunity for a price rise. If you can buy a stock at a P/E ratio at or somewhat below your judgment as to what is an appropriate average P/E ratio, the odds for a significant price appreciation increase."

Choice for High & Low P/E

Clear Outliers

	High PE	Low PE
1997	23.5	15.4
1998	38.0	16.2
1999	36.2	23.9
2000	30.0	17.7
2001	36.5	17.1
2002	25.9	18.0
2003	25.9	14.7
2004	22.2	17.1
2005	20.1	14.9
2006	17.4	13.3
Average:	27.6	16.8

Use Section 3 Averages

Use Average From Above

Use Median

D	E
Price Earnings Ratio	
HIGH A÷C	LOW B÷C
25.9	18.1
25.9	14.7
22.1	17.1
20.1	14.9
17.4	13.3
111.4	78.1
22.3	15.6

Let’s review our basic choices for high and low price. Starting with P/Es, our easy options are:

10 year average high and low

5 year average high and low

5 year average modified high and low

10 year median high and low

Choice for High & Low P/E

Clear Outliers

	High PE	Low PE
1997	23.5	15.4
1998	~~38.0~~	16.2
1999	~~36.2~~	~~23.9~~
2000	~~30.0~~	~~17.7~~
2001	~~36.5~~	~~17.1~~
2002	~~25.9~~	~~18.0~~
2003	25.9	14.7
2004	22.2	~~17.1~~
2005	20.1	14.9
2006	17.4	13.3
Average:	21.8	14.9

Use Section 3 Averages

Use Average From Above

Use Median

ALT-M

With ALT-M, the program removes the 5 highest P/Es on both sides and averages the remaining 5.

And either last year's P/Es, or the average of the last 2 years

The nice thing about being "too conservative" is that you won't get caught up in manias. One of the biggest mistakes investors make is buying companies at too high a price. It doesn't seem so at the time, but that's what happens.

When the P/E ratio is excessively high, the future good news is already discounted in the price.

Comparison is the Key

Company	Ticker	Price	Growth	Net Margin	P/E	Quality	PAR
Cadbury Schweppes	CSG	$45.89	3.3%	10.0%	22.5	64.8	13.6%
Coca-Cola	KO	$54.98	7.0%	22.6%	23.1	86.6	12.1%
Coca-Cola Bottling	COKE	$54.07	5.0%	2.7%	19.1	29.7	14.8%
Coca-Cola Enterprises	CCE	$23.68	4.0%	4.0%	17.6	19.9	7.5%
Coca-Cola Hellenic*	CCH	$44.49	7.4%	8.0%	19.0	50.4	9.9%
Cott Corp.	COT	$11.72	3.3%	3.5%	21.0	18.8	12.4%
Hansen Natural Corp	HANS	$45.58	21.4%	17.9%	27.6	77.5	14.5%
Jones Soda	JSDA	$11.23	28.1%	15.7%	36.0	64.5	23.0%
Pepsi	PEP	$67.95	7.1%	14.8%	20.0	88.1	10.5%
Pepsi Bottling	PBG	$34.84	5.0%	4.0%	20.0	40.3	11.8%
PepsiAmericas	PAS	$27.19	5.0%	4.9%	19.0	46.0	8.7%
Average			6.5%	7.5%	21.5		

PE selection depends on the industry average and the companies you're studying. If a certain
industry P/E is 30x and you choose a P/E of 25x for a company, that may not be too bad. On the other hand if the industry average is 15x, and you select a P/E of 27x may not be a good idea.

Here you can see that Jones Soda is priced for perfection as compared to its industry.

PEG Ratios—A Guide to Calculating the High Price

- PEG = PE / EPS Growth Rate
- Use Next 12 Months EPS

- Example (8/10/07) LOW:
- Price $27.76
- EPS (N4Q) $2.13 (27.76 / 2.13 = 13 P/E)
- Yahoo 5-Yr Growth Rate 15.2%
- PEG (13 / 15.2% = .85 PEG)

PEG Ratios—A Guide to Calculating the High Price:

The PEG Ratio in its simplest form is PE / EPS Growth Rate. Some prefer to add the dividend yield as well. Since a company's price is determined by investors' future expectations, many experienced investors prefer to use the estimated EPS for the next 12 months when calculating the PEG.

In this example, we use the next 4 quarters, which can be found on the back of the SSG. Popular opinion would have us purchase a stock under 1.0.

PEG Ratios—A Guide to Calculating the High Price

- Beware of One-Size Solutions
- Compare PEGs to Company Industry
- Compare PEGs to Company History

Remember:
(1) If P/Es are industry-specific
(2) And Growth is also industry-specific
(3) Then PEG Ratios are industry-specific

But beware! A one-size absolute is not a fair comparison. We'd be smart to compare the PEG to its industry; then to the company's 10-year history. The trick here is to determine if the market is being overly optimistic or pessimistic and there is not some underlying strength or weakness in the company not yet included in its price.

So.

(1) If P/Es are industry-specific

(2) And Growth is also an industry-specific condition
(3) Then PEG Ratios are industry-specific.

PEG Ratios—A Guide to Calculating the High Price

Beware of these rules:

- Buy below 100%
- Sell above 150%

What's the average PEG ratio for the market?

(P/E of 14.9) / (LTGR of 10.5%) = 1.42

Therefore, rules that revolve around PEG ratios, such as buying below 100% or selling above 150%, are not a good idea. Some stocks, like Colgate, 3M, Avon and others never sell for less than 2x their earnings growth rates.

If the PEG ratio looks too invitingly low such as 50 or 60, then probably someone knows something we don't know, and that "something" is not good. And, likewise, if it's too high, it's probably too expensive. One way to make money is to avoid losing it by paying inflated values for stocks.

Not that it's a good judge, but for perspective you may ask, "What's the average PEG ratio for all companies right now?" The forward P/E of the S&P 500 (based on Morningstar 8/10/07) is 14.9 and its long-term growth rate has been 10.5%. So the average PEG ratio for the S&P 500 today is 14.9 / 10.5 = 1.42.

Drilling Down to Low Price

- There needs to be a clear *reason*
- Section 4Ba is pretty darn clear for growth
- Give heavy weight to the 52-week low
- Anything above is unrealistic
- Stocks can and do drop 10-20%
- Use a historical price chart
- Give weight to the most recent trends

The SSG basically provides a framework for estimating a future price range (up-side vs. down-side). For SSG low price (section 4B), you probably won't get much agreement about what its even supposed to mean. The *worst* that can happen is zero (you could lose your entire investment). In the context of comparing up-side with down-side that's not a very useful definition. Some say that's reason enough to dispense with low price altogether.

Jim Thomas and Ellis Traub agree on the philosophy of the low price. It shouldn't be based on temporary issues because---if the problems were really bad, or long-term in nature--we wouldn't continue to hold it, anyway.

There needs to be a clear *reason* behind the use of any low price selection. And the reason behind 4B(a) is pretty darn clear and logical for growth stocks. Here are some rules of thumb:

Give heavy weight to the last 52-week low price.

For a growth company, the selected low price will likely occur within the next 12 months.

Ralph Seger says anything above the current 52 week low is unrealistic.

Stocks can and do drop 10-20% within 12 months.

Look at a bar chart to see when that 52-week low occurred. It if occurred almost a year ago, don't give it as much weight as if it occurred last week.

SSG's "Other" Choices

Why we don't use 4B 4C or 4D:
- SSG was created to detect growth
- 5-year Average
- Recent Severe Market Low
- Price the Dividend Will Support

---NONE are appropriate for growth!

We don't use 4B 4C or 4D for our low price:

Remember, the SSG was created to find and study growth stocks.

The 5-year average and the Severe Market Low options are simply not suitable for stocks that are supposed to growing every year.

And, the price the dividend will support is unrealistic since many growth stocks don't have one. Ralph once wrote, "Unless the stock yields significantly more than the overall S&P 500, then it's not logical. Stop and think. How high will a well-protected dividend yield have to rise before the stock is attractive on a yield basis? Certainly yields of 1%, 2% or even 3% are not going to support the price. For a REIT or telephone company, probably the high yield is a guide to judging a possible low. The price dividend will support is more meaningful when you are looking at an income stock.

Worst-Case Scenario

"…as a worst case scenario, look at the lowest P/E in column 3E and multiply it by the TTM EPS…"world class" companies get a slight premium…

… I generally use my forecasted EPS for the NEXT 12 months and multiply it by my low forecasted P/E ratio "

And finally, from "New Jersey Joe" Smith, another fine national instructor, "…as a worst case scenario, look at the lowest P/E in column 3E and multiply it by the TTM EPS…"world class" companies get a slight premium. In the case of these companies (Home Depot, Merck, Emerson Electric, etc.), I generally use my forecasted EPS for the NEXT 12 months and multiply it by my low forecasted P/E ratio (using my own informed judgment) and that gives me my selected low price.

Advanced Methods of Calculating High and Low Prices

This section is not for the newbie, or the faint-of-heart!

Bob Adams' High/Low Method

- Calculate the high/low ratio for the last 5 year prices (Section 3a&b)
- (high price minus low price divided by high price = high/low ratio)
- Calculate the same ratio for the most recent completed year
- Multiply your estimated high price (Section 4a) by the ratio to get your low price

Bob Adams, a longtime chapter director from the Puget Sound, the author of the famous Annual Report Worksheet, and a favorite national instructor, teaches the "High/Low Method" of choosing the low price. Here goes:

Calculate the high/low ratio for the last 5 year prices in Section 3a&b

To do that, you take the high price minus the low price divided by the high price = high/low ratio)

Calculate the same ratio for the most recent completed year

Multiply your estimated high price (Section 4a) by (1 minus the ratio) to get your low price

I suppose we need any example of this.

Bob Adams' High/Low Method

	Year	A PRICE HIGH	B LOW	E
1	2002	24.1	16.8	
2	2003	30.0	17.0	
3	2004	30.1	23.2	
4	2005	34.7	25.8	
5	2006	34.7	26.4	
6	TOTAL	153.6	109.2	
7	AVERAGE	30.72	21.8	
8	AVERAGE PRICE EARNINGS RATIO			18.9

30.72 – 21.80 / 30.72 = .29 or 29%

Example: LOW for 8/10/07:

5-year average high price is $30.72

5-year average low price is $21.80

$30.72 - $21.80 / $30.72 = 29%

100% - 29% = 71%

Bob Adams' High/Low Method

	Year	A PRICE HIGH	B PRICE LOW	E
1	2002	24.1	16.8	
2	2003	30.0	17.0	
3	2004	30.1	23.2	
4	2005	34.7	25.8	
5	2006	34.7	26.4	
6	TOTAL	153.6	109.2	
7	AVERAGE	30.72	21.8	
8	AVERAGE PRICE EARNINGS RATIO			18.9

34.72 – 26.40 / 34.72 = .24 or 24%

2006 annual high price is $34.72

2006 annual low price is $26.40

$34.72 - $26.40 / $34.72 = 24%

100% - 24% = 76%

Bob Adams' High/Low Method

A HIGH PRICE -- NEXT 5 YEARS

Avg. High P/E 22.3 21.0 X Estimate High Earnings/Share 3.10 = Forecast High Price $ 65.1

$65.10 x 71% = $46.22
$65.10 x 76% = $49.48

The 52-week high is $35.74
$35.74 x 71% = $25.38
$35.74 X 76% = $27.16

By the way, my 13 P/E x 1.94 TTM = $25.20

My high price estimate is a P/E of 21 x my estimated EPS of $3.10 = $65.10

$65.10 x 71% = $46.22

$65.10 x 76% = $49.48

Now I thought that was rather high, so I applied the high/low ratio to the 52-week high which was $35.74

$35.74 x 71% = $25.38

$35.74 X 76% = $27.16

And this put it very close to my own low price in 4Ba.

Gayle Olson's PVQ

Price Variant Quotient:

1. Avg. 5-year high price minus
   Avg. 52-week low price
   Divided by Avg. 52-week high price
   expressed as a percentage

2. Subtract that percentage from the 52-week high price to get the estimated low price

Gayle Olson from the Minneapolis/St. Paul chapter developed the Price Variant Quotient or PVQ method. It was so well received that Ellis Traub made it an undocumented feature in Toolkit 4 and 5. If you click on the low price option on the back of the SSG, then press ALT-R, the program will figure PVQ in the "other" option box. Here's how it's calculated:

Take the average 5-year high price

minus the average 52-week low price

and divide it by the average 52-week high price,

expressed as a percentage.

In essence, you are figuring the high/low ratio using a slightly different set of numbers.

Then, subtract that percentage from the 52-week high price to get the estimated low price

Gayle Olson’s PVQ

- Using LOW’s again,
- Average 5-year high price is $30.72
- Average 52-week low price is $26.15
- Average 52-week high price is $35.74
- ($30.72 - $26.15 / $35.74 = 13% (100% - 13% = 87%)
- $35.74 x 87% = $31.09
- (Morningstar’s buy-below on 8/10 was $33.20)

Using LOW’s again,

Average 5-year high price is $30.72

Average 52-week low price is $26.15

Average 52-week high price is $35.74

($30.72 - $26.15 / $35.74 = 13% (100% - 13% = 87%)

$35.74 x 87% = $31.09

(By the way, as of 8/10/07, the Morningstar “buy below” price, based on their discount cash flow model is $33.20

Gayle once wrote, “I have found this to be more relevant to the determination of a potential low price because it is based upon a historical footprint of the trading pattern of a given company. It is also dynamic in that it changes based upon the most recent 52 week high price.

Testing Reasonableness

Compare selected high price to Value Line

Also compare to Take Stock at StockCentral

LOWE'S COS. NYSE-LO

TIMELINESS 3 Lowered 9/1/06
SAFETY 2 Raised 4/7/06
TECHNICAL 2 Raised 6/22/07
BETA 1.00 (1.00 = Market)

2010-12 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	75	(+140%)	25%
Low	55	(+75%)	16%

Insider Decisions

Dividend 0.16 ÷ Current Price = Current Yield 0.6%
= Potential High Price: 61.93
= Projected Average Price: 51.99

There are plenty of sources for testing the reasonableness of your estimates, none of which are better than comparing them to someone else who's trying to do the same thing you are.

Compare your selected high price to Value Line's high price range. Value Line is highly respected and we would be foolish to ignore their opinion, even if we don't agree with it.

As of 8/10/07: Value Line's high price range for LOW's was $55 to $75 vs. my $65.10.

Take Stock on StockCentral 5-year estimate is $61.93

Testing Reasonableness

2nd Opinions for Estimated Long Term EPS:

- My SSG is $3.10
- Take Stock on StockCentral is $2.84
- MSN/Zacks is $3.82
- Yahoo/Reuters is $3.94
- Manifest is $3.34
- Value Line is $3.40 (4 year estimate)

Second opinions for estimated long-term earnings are easy to find.

My SSG is $3.10

Take Stock on StockCentral is $2.84

MSN/Zacks $3.82

Reuters/Yahoo $3.94

Manifest $3.34

Value Line $3.40

These are all 5-year estimates, except for Value Line which is a 4 year estimate.

Testing Reasonableness

PEG Test for High Price:

- Get the 10-year average EPS growth rate from front of the SSG
- Get the 10-year average P/E ratio from the Pert B Report
- Calculate the historical PEG

Here's another way to test the high price, using the historical PEG:

Get the 10-year average EPS growth rate from front of the SSG

Get the 10-year average P/E ratio from the Pert B Report

Calculate the historical PEG

Testing Reasonableness

2006	2007	2008	2009	2010

Hist. EPS Growth: 17.0

Est. EPS Growth: 16.0

P/E RATIO	
HIGH	LOW
55.1	30.0
40.0	15.5
35.0	19.9
33.5	16.8
38.8	25.7
46.9	29.6
46.0	25.4
37.1	26.0
37.9	23.2
37.0	25.2
40.7	23.7

10 yr EPS growth is 17%

10 yr avg. P/E is 40.7+23.7 / 2 = 32.2

The historical PEG is 32.2 / 17 = 1.89

So for Fastenal,

10 yr EPS growth is 17%

10 year Avg. P/E is 40.7+23.7 / 2 = 32.2

So, the historical PEG is 32.2 / 17 = 1.89

Testing Reasonableness

2006 2007 2008 2009 2010

Hist. EPS Growth: 17.0

Est. EPS Growth: 16.0

Future PEG is 16% future g
x Historical PEG 1.89
= future high P/E of 30.2

© VALUE LINE PUB., INC.	'10-12
Sales per sh	23.90
"Cash Flow" per sh	3.00
Earnings per sh A	2.70
Div'ds Decl'd per sh B	.70
Book Value per sh	13.65
Common Shs Outst'g C	150.50
Avg Ann'l P/E Ratio	27.0
Relative P/E Ratio	1.70
Avg Ann'l Div'd Yield	1.0%

Now, figure your future EPS growth rate (yours or from Value Line's annual rates box)

Multiply your estimated EPS growth rate x the historical PEG

In this case, the growth rate I chose was 16% x the historical PEG of 1.89.

This gives me a future high P/E of 30.2, which by the way, I would cap at 30.

Compare your result to Value Line's forecasted P/E in the statistical array.

Currently, it's 27.

You might want to calculate the 5 year average PEG and the current PEG based on forward EPS and see how they all stack up. It's not a perfect system, but it's the best we've got…considering…

Back to Perspective

Jim Thomas:

- "I don't actually expect to get 20% if I invest in that stock and hold it for 5 years…
- …they should tend to steer me towards investing in stocks that will likely produce higher returns, and away from stocks that are likely to produce slower returns."

Which brings me back to perspective…

As Jim Thomas said, "If my estimates come close to a 20% return, I don't actually expect to get 20% if I invest in that stock and hold it for 5 years. What I do expect is that, more often than not, I'll get a "better" return by investing in that stock than if I invest in a stock with an estimated 15% (or 10%) return. I'm interested in Manifest and the SSG because they should tend to steer me towards investing in stocks that will likely produce higher returns, and away from stocks that are likely to produce slower returns."

My lesson for today is…don't get too nutty over these numbers. They were never meant to be exact.

The End

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