Ratios And How They Are Used In Our Process of Analyzing Portfolios, Industries and Companies

BI – SEMI MC

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No investment recommendation is intended.

This is an educational demonstration.

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Securities discussed may be held by the instructors in their own personal portfolios or in those of their clients.

What is a Ratio:

Think of it as a Percentage. %

- By Definition; Comparison of two items, expressed as:
- Example 1: Derived from1300 / 400
  - 3.25:1
  - 325.0%
  - 325.
- Example 2: Derived from 58.75 / 47
  - 1.25:1
  - 125%
  - 125.

What is our GOAL (Overall ”Macro Goal”)

Let’s start at Portfolio Level:

- “The founders of BI believed a hard-working club could beat the market by 5%. an average stock had returned about 10% for a reasonable time period, Since a a goal of 15% was seen as achievable. The idea of doubling your money in five years was probably NOT the impetus for choosing 15%.”
- Using the Rule of 72nd’s: 72 / 15% avg annual portfolio return, results in an average doubling of our portfolio every 4.8 years.
- We also believe from experience that using the BI – SSG process that if we pick 5 stocks to buy, the result will generally be 1 will underperform, 3 will achieve our goals and 1 will overachieve

So how do we achieve a 15% Average Annual Return FOR OUR BI – SEMI Model Club PORTFOLIO

- If the Average annual return for our portfolio (i.e.: Our Portfolio's PAR) was
  - 4.25% NO
  - 10.3% NO
  - 12.8%. NO……but we're getting closer
  - 15.0%. Yes, Double in 5 years
  - 16.8%. Yes, Double in 4.3 Years. (72 / 16.8% = 4.3 years)
  - How do we "move" a portfolio that we believe from our SSG PAR's from 12.8% average to 15.0% average PAR….
    - Answer: GIVEN THE ASSUMPTION, that we believe our SSG's and our PAR's, we "weed" out – i.e.: sell our stocks with the lowest PAR's and buy new stocks OR MORE of our Existing stocks which have a higher PAR's and thus increasing our Portfio's Overall Average PAR.

Our Goal - Most Important Ratios

- PAR – Projected Annual Return
  - Target 15% - Portfolio Return
  - Ex: SCHW. SSG ; Page 2

C. COMPOUND ANNUAL RETURN - USING FORECAST HIGH P/E

Annualized Price Appreciation	22.2%
Average Yield	1.1%
Annualized Rate of Return	23.3%

COMPOUND ANNUAL RETURN - USING FORECAST AVERAGE P/E

Annualized Price Appreciation	16.9%
Average Yield	1.3%
Annualized Rate of Return	18.3%

BI – SEMI- MC RATIOS

U/D (Upside Downside) Ratio. (Reward / Risk Ratio) $\geq$ 3.0: 1
Example: SCHW

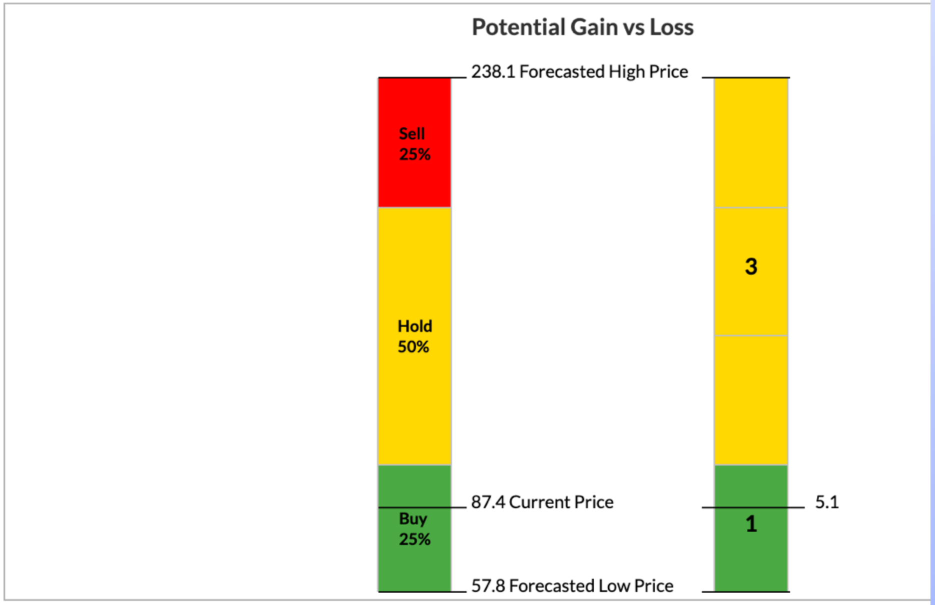
C. ZONING using 25%-50%-25% (click to toggle)

Forecasted High Price: **238.1** Minus Forecast Low Price: **57.8** = **180.3** Range. **25%** of Range: **45.1**

Buy Zone:	**57.8**	to	**102.9**
Hold Zone:	**102.9**	to	**193.0**
Sell Zone:	**193.0**	to	**238.1**

Current Stock Price of **87.36** is in the **BUY** Zone.

Show / Hide Gain vs Loss Chart



D. UPSIDE DOWNSIDE RATIO (POTENTIAL GAIN VS. RISK OR LOSS)

$$\frac{\text{Forecasted High Price - Current Price}}{\text{Current Price - Forecasted Low Price}} = \frac{(238.1 - 87.36)}{(87.36 - 57.8)} = \frac{150.73}{29.56} = \textbf{5.1 To 1}$$

SSG Results Summary

Zone:	**BUY**
Upside Downside Ratio:	5.1 To 1
Total Return (High P/E):	23.3%
Projected Return (Avg. P/E):	18.3%
Buy price to satisfy US/DS of 3 to 1 and 15% total return:	102.9
Buy Below price based on zoning selection:	102.9
Current Price (06/13/25):	87.36

So, What TOOLS Do we Use To EVALUATE & FORECAST INDIVIDUAL STOCKS That make up our PORTFOLIO

- BI's ToolBox: SSG, SSC, PERT Report, Quick Connections to Other Resources (Yahoo, NASDAQ, Zacks, Finviz, Co. Web Site, etc.)
- VL – Valueline (INDUSTRY & STOCK Reports)
- Manifest Investing
- Morningstar, Yahoo, Etc.

SSG Ratios Page

Analyze Growth and Quality | Valuation and Return | Quarterly Data | Ratios | Audit | Sentiment | Notes: 3

Company: Charles Schwab (SCHW) Study Name: Charles Schwab Corp 5/16/2025

Valuation Ratios

RELATIVE VALUE ?

Current P/E: **26.5** / Average 5 Year P/E: **23.1** X 100 = **114.6%**

PROJECTED RELATIVE VALUE ?

Projected P/E: **22.1** / Forecast Average P/E: **23.3** X 100 = **94.9%**

PEG RATIO ?

Projected P/E: **22.1** / Forecast EPS Growth Rate: **20.0%** = **1.1**

View Calculation Reference

Liquidity Ratios

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Current Ratio ?	---	---	---	---	---	---	---	---	---	
Quick Ratio ?	---	---	---	---	---	---	---	---	---	
Interest Coverage ?	---	---	---	---	---	---	---	---	---	

Valuation Ratios in the Ratio's Tab

1.Relative Value: Relative value compares the current P/E to the average P/E ratio (adjusted by removal of any outliers) for the last five years — it measures how much investors are currently paying for a stock compared with the average P/E during the past five years.

2.Projected Relative Value: Projected relative value uses your EPS growth rates and high and low P/E projections (projected P/E) to present a more forward-looking view of relative value.

3.PEG Ratio (PEG): The PEG ratio compares a stock's projected P/E with forecasted earnings growth to establish a broader valuation ratio that includes projected growth on the theory that the market is willing to pay for high-quality growth.

Valuation Ratio Considerations

The PERT report will ‘flag’ the **<u>Projected Relative Value</u>** if is **<u>below 80 or above 150.</u>**

• If below 80, consider if the company is ‘on sale’ because of a problem with fundamentals.

• If above 150, consider if another investment might provide better value.

Liquidity Ratios in Ratio's Tab

LIQUIDITY RATIOS: Ratios that measure a company's ability to meet its short-term obligations and convert assets into cash quickly.

BETTERINVESTING SSG PLUS

Switch Tools
SSGPlus CoreSSG

File Data Print Research Tools BI Home Logout

Analyze Growth and Quality | Valuation and Return | Quarterly Data | Ratios | Audit | Sentiment | Notes: 3

Company: Schlumberger (SLB) Study Name: Schlumberger Ltd 5/6/2025 - Tony/Jo

Quick Navigation

Valuation Ratios

RELATIVE VALUE ?

Current P/E: **12.3** / Average 5 Year P/E: **18.2** X 100 = **67.5%**

PROJECTED RELATIVE VALUE ?

Projected P/E: **11.4** / Forecast Average P/E: **18.3** X 100 = **62.4%**

PEG RATIO ?

Projected P/E: **11.4** / Forecast EPS Growth Rate: **8.0%** = **1.4**

View Calculation Reference

Liquidity Ratios

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Current	Trend
Current Ratio ?	1.9	1.6	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.4	1.2	
Quick Ratio							0.8	0.8	0.9	1.0	0.8	
Interest Coverage							5.4	9.7	11.5	12.1	10.8	

The Current Ratio indicates a company's ability to pay its short-term obligations, or those due within one year. Calculated by dividing current assets by current liabilities. The higher the ratio, the more liquid the company.

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Current Ratio:

• The Current Ratio indicates a company's ability to pay its short-term obligations, or those **due within one year**. Calculated by dividing current assets by current liabilities. The higher the ratio, the more liquid the company.

• A 'good' number is > 1.5

• Below 1 is considered a warning

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Current	Trend
Current Ratio ?	1.9	1.6	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.4	1.2	

Quick Ratio:

• The Quick Ratio indicates a company's ability to pay its short-term obligations, or those due within one year, with liquid assets. Liquid assets can be **quickly converted to cash**, including cash, cash equivalents, and accounts receivable. Calculated by dividing the company's liquid assets (cash + cash equivalents + accounts receivable) by current liabilities.

• It is considered a **more conservative ratio** than the current ratio. The higher the ratio, the more liquid the company.

• **A 'good' number is > 1.5**

• **Below 1 is considered a warning**

Liquidity Ratios

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Current	Trend
Current Ratio ?	1.9	1.6	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.4	1.2	
Quick Ratio ?	1.5	1.2	0.9	0.8	0.8	0.8	0.8	0.8	0.9	1.0	0.8	

Interest Coverage:

• Interest Coverage indicates a company's ability to pay the payments on its debt. Calculated by dividing EBIT (earnings before interest and taxes) by interest expenses. The higher the ratio, the stronger its ability to meet interest payments.

Guidelines for Interest Coverage

• Higher Interest Coverage is better.

Interest Coverage Guideline:

Greater than 7 Adequate for most companies

Under 5 Warning!

Under 3 Big RED Flag!

• There is variation in different industries. It is helpful to compare the studied company to others in the same industry

Liquidity Ratios

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Current	Trend
Current Ratio ?	1.9	1.6	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.4	1.2	
Quick Ratio ?	1.5	1.2	0.9	0.8	0.8	0.8	0.8	0.8	0.9	1.0	0.8	
Interest Coverage ?	9.3	-2.3	-1.1	5.6	-16.1	-19.1	5.4	9.7	11.5	12.1	10.8	

3 Pages of SSG Calculation References

SSG Calculation Reference – Page 1

Updated: September 17, 2024

This reference sheet explains the basic calculations used in the BetterInvesting Online Stock Selection Guide Tools. Use CTRL-F (Windows) or ⌘-F (Mac) to search the document.

Sales growth rate / Sales Trend Line	The average growth rate is calculated by determining the 'least squares' regression line of best fit using the natural log (LN) of the company data. FAQ: How is the average growth rate calculated? | BetterInvesting
Earnings growth rate / Earnings Trend Line	The average growth rate is calculated by determining the 'least squares' regression line of best fit using the natural log (LN) of the company data. FAQ: How is the average growth rate calculated? | BetterInvesting
Total assets growth rate (for Banks only, SSGPlus only)	The average growth rate is calculated by determining the 'least squares' regression line of best fit using the natural log (LN) of the company data. FAQ: How is the average growth rate calculated? | BetterInvesting
% Return on Equity	Earnings Per Share / Book Value Per Share (end of period)
% Pre-tax Profit on Sales	Pre-Tax Income / Sales
% Debt to capital	Total Debt / (Total Debt + Shareholders Equity) (used in CoreSSG/SSGPlus) –or- LT Debt/ (LT Debt + Shareholders Equity) (used for data imported from TK6 to CoreSSG/SSGPlus)
% Debt to equity (not used in SSGPlus)	Total Debt / Shareholders Equity (not used in Core/Plus or Toolkit) –or- Long Term Debt / Shareholders Equity (used in Toolkit 6)
% Return on Avg Assets	Net Income / Total Assets (average of beginning and ending of period)
Est EPS Next 12 Months	TTM EPS * (1+ Forecast EPS Growth Rate)
Free Cash Flow/Share	(Operating Cash Flow-Capital Expenditures)/ Diluted Shares Outstanding
Potential Annualized Price Appreciation (using Forecast High P/E)	(((High Stock Price Forecast / Current Stock Price)^(1/5))-1)*100
Potential Annualized Price Appreciation (using Forecast Average P/E)	((((Projected Average P/E * 5 Yr EPS Forecast Value) / Current Stock Price)^(1/5))-1)*100
Present Yield	Indicated Dividend / Current Stock Price
Projected Yield (using Forecast High P/E)	Projected Payout / Forecast High P/E
Projected Yield (using Forecast Average P/E)	Projected Payout / Forecast Average P/E
Projected Relative Value (used in PERT report)	Projected PE / Average PE (Projected)
Compound Annual Return (Using Forecast High P/E) a.k.a. Total Return	Potential Annualized Price Appreciation (using Forecast High P/E) + Projected Yield (using Forecast High P/E
Compound Annual Return (Using Forecast Average P/E) a.k.a. Projected Average Return (PAR)	Potential Annualized Price Appreciation (using Forecast Average P/E) + Projected Yield (using Forecast Average P/E

- Ssgcalculationreference.pdf
  - 3 Page .pdf file

PEG RATIO ?

Projected P/E: **22.1** / Forecast

View Calculation Reference

BI – SEMI- MC RATIOS




1. It's important to understand the relationship between growth and P/E. When forecasting, consider industry, position in life cycle, quality … while forming P/E expectations.

2. One size doesn't fit all. Not even hush puppies.

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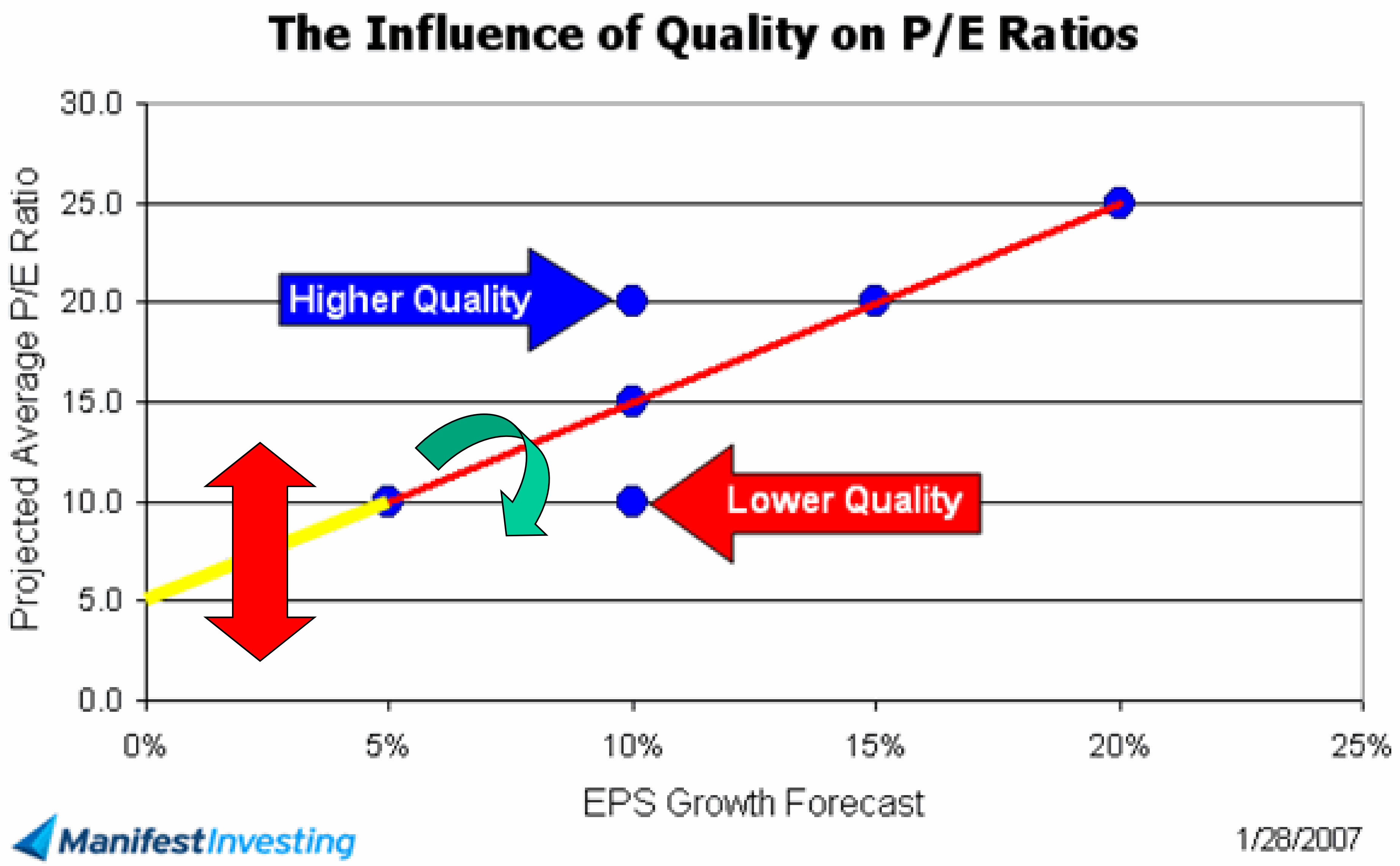


The Influence of Quality on P/E Ratios
Projected Average P/E Ratio
30.0
25.0
20.0
15.0
10.0
5.0
0.0
0%
5%
10%
15%
20%
25%
EPS Growth Forecast
Higher Quality
Lower Quality
ManifestInvesting
1/28/2007

4 EVALUATING REWARD and RISK over the next 5 years

A FUTURE HIGH PRICE ANALYSIS – NEXT 5 YEARS

Selected High P/E 25.8 X Estimated High Earnings/Share 5.13 = Forecast High Price $ 132.4

B FUTURE LOW PRICE ANALYSIS – NEXT 5 YEARS

(a) Sel. Low P/E 17.3 (as adj.) X Estimated Low Earnings/Share 2.92 = $ 50.5

(b) Average 5-Year Low Price = 44.8

(c) Recent Severe Low Price = 30.7

(d) Price Dividend Will Support = Present Divd. ÷ High Yield = 0.960 ÷ 0.022 = 43.3

Selected Estimated Low Price = $ 44.8

The Bottom Line: 5. Projected Annual Return (PAR)

Your choice of P/E (or the P/E range) has a significant impact on your return forecast for any stock study.

Price/Earnings To Growth - PEG Ratio

What Does *Price/Earnings To Growth - PEG Ratio* Mean?

A ratio used to determine a stock's value while taking into account earnings growth. The calculation is as follows:

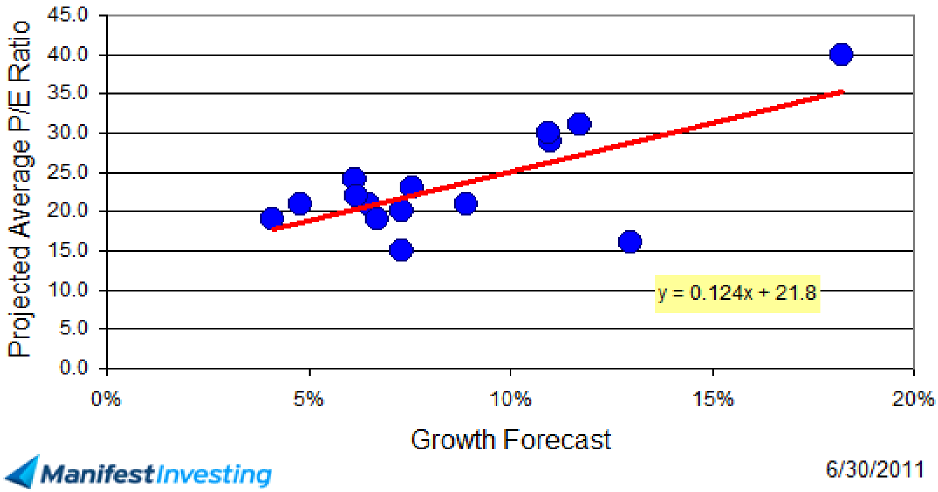
$$\text{PEG Ratio} = \frac{\text{Price/Earnings Ratio}}{\text{Annual EPS Growth}}$$

Investopedia explains *Price/Earnings To Growth - PEG Ratio*

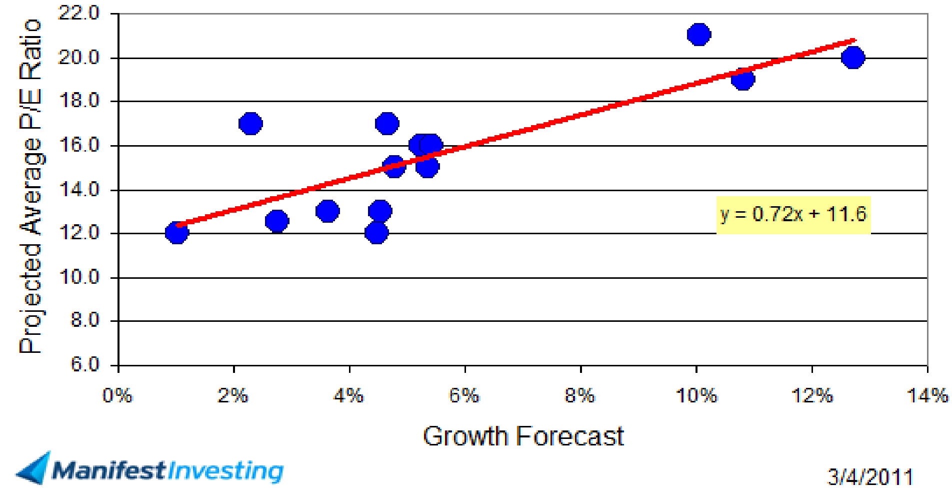
PEG is a widely used indicator of a stock's potential value. It is favored by many over the price/earnings ratio because it also accounts for growth. Similar to the P/E ratio, a lower PEG means that the stock is more undervalued.

Keep in mind that the numbers used are projected and, therefore, can be less accurate. Also, there are many variations using earnings from different time periods (i.e. one year vs five year). Be sure to know the exact definition your source is using.

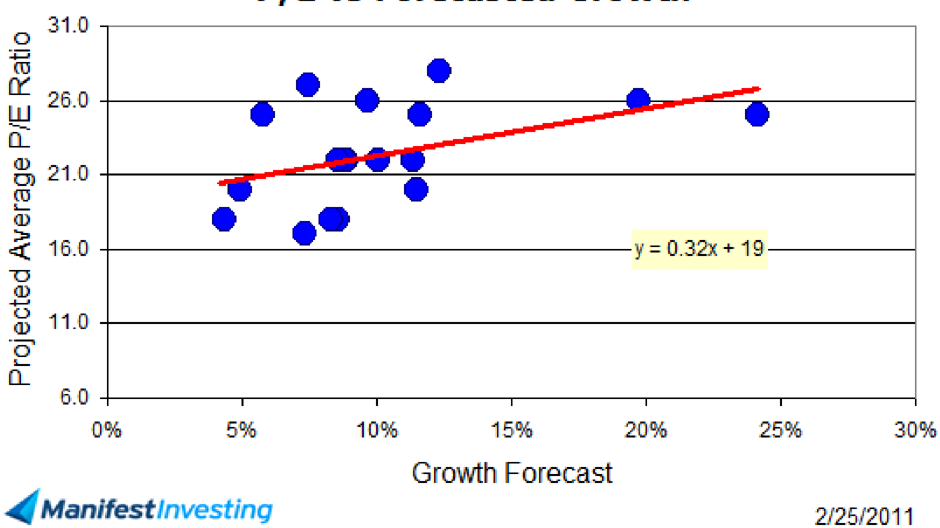
Software (Application)
P/E vs Forecasted EPS Growth



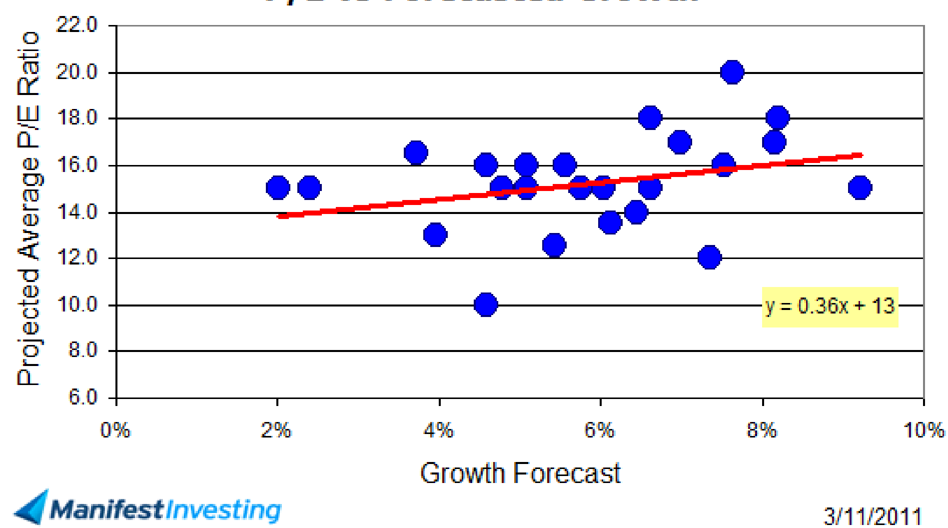
Restaurants (Fast Food)
P/E vs Forecasted Growth

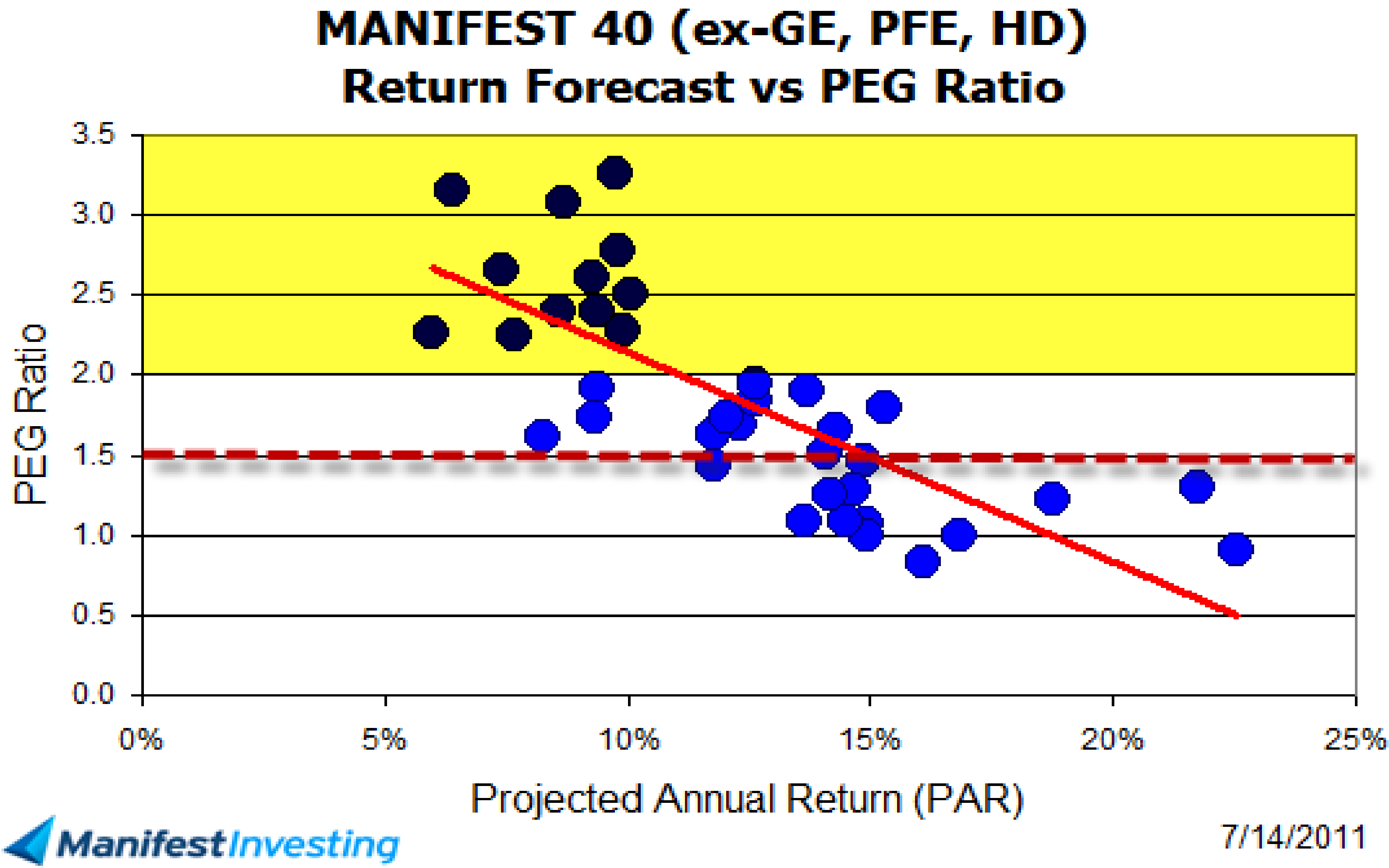


Medical Supplies
P/E vs Forecasted Growth



Chemicals (Specialty)
P/E vs Forecasted Growth




MANIFEST 40 (ex-GE, PFE, HD)
Return Forecast vs PEG Ratio
PEG Ratio
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
0%
5%
10%
15%
20%
25%
Projected Annual Return (PAR)
ManifestInvesting
7/14/2011

"The P/E ratio of any company that is fairly priced will equal its growth rate. In general, a P/E ratio that is half the growth rate is very positive, and one that is twice the growth rate is very negative." – *One Up On Wall Street*

PEG Ratio	Recommendation
>200% (2.0x)	Expensive
150% (1.5x)	Consider Selling
100% (1.0x)	Fairly Valued
~50% (0.5x)	Attractive

Some things to ponder

Here are a few more interesting tidbits from my study:

- 92% of companies with PEG ratios of less than 1 beat the market over three years.
- 68% of companies with PEG ratios of between 1 and 2 beat the market.
- 47% of companies with PEG ratios greater than 2 beat the market.
- The best performer was (surprise, surprise) **Hansen Natural** (Nasdaq: HANS). It had a PEG of 0.08 in 2003 and had gained 5,400% through March.
- The second-best performer was **NutriSystem** (Nasdaq: NTRI) with a PEG of 0.06 and a gain of 5,200%.
- Despite a PEG of 0.55, **Ford** (NYSE: F) managed only a 14% gain over three years.
- **Dick's Sporting Goods** (NYSE: DKS) was "fairly valued" with a PEG of exactly 1, but it still appreciated by 265%.
- A PEG of 8 didn't stop **Select Comfort** (Nasdaq: SCSS) from appreciating by 266%.

Valuation Ratio Considerations:

“BetterInvesting doesn’t have hard and fast ‘rules’ about what is a good ratio value and what isn’t a good ratio value.

BetterInvesting considers the best use of valuation ratios to be **comparison** with other stocks.

Relative Value and PEG are on the SCGPlus Comparison Guide”

Other Internet Resources Regarding Investing Ratios

https://www.schwab.com/learn/story/five-key-financial-ratios-stock-analysis

https://www.forbes.com/sites/investor-hub/article/10-key-financial-ratios-every-investor-should-know/

https://medium.com/@kriteshabhishek/15-financial-ratios-for-stock-analysis-picking-dc2dad472169

https://www.youtube.com/watch?v=z-HxXQpTsRw

https://www.youtube.com/watch?v=UPOtO5rlZN0

Questions?

References / Sources in this Presentation

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