

Stock Selection Guide (SSG) & Portfolio Management Magic

How to select stocks and manage your portfolio

Mike Torbenson

12/12/20

Second Edition

Introduction

There are dozens of strategies used to make (and lose) money in the stock market. This workbook is about the BetterInvesting (BI) strategy dating back to the 1940¹ with the belief that anyone can build wealth by practicing fundamental investing. BI is a blend of many strategies with value investing at its core. The primary skill required is patience. Warren Buffet said, “The stock market is a device for transferring money from the impatient to the patient.” BI is a very conservative methodology that selects only high-quality stocks then waits. Waits until we can buy low; eventually sell high; and repeat.

I joined NAIC (National Association of Investment Clubs), in 1987. Today NAIC is known as BetterInvesting. Pushing 40 years old and not expecting Social Security to exist when I retired it became clear I needed to be able to generate income without a paycheck if I ever want to retire. I was married with two girls; completed 5 years as a Surface Warfare Officer in the Navy and another 5 years as an elementary school teacher. Currently, I owned a one-man computer consulting company and was beginning to fully understand what “earning your own way” really meant.

It seemed, retiring could only happen after I grew my business into something of value that could be sold. Then I met Sonny in an advanced spreadsheet class I was teaching. He was creating a spreadsheet to track stocks for an investment club. He invited and I joined. I figured after 2-3 years of study; I'd be ready to go-it on my own.

Seventeen years later in 2004, still learning, but enjoying some success, I joined the Puget Sound Chapter of BetterInvesting to share this knowledge with others. This workbook is the composition of all the workshops I presented and attended over the years. This workbook is written with other teachers, individual investors, and investment clubs in mind.

Today, forty years after joining BetterInvesting I am still learning. However, I am retired and thanks to this methodology and lots of hard work (and good luck) along the way, my wife and I are living very comfortably; both girls are married, and we have grandchildren to spoil.

If you choose to pursue this strategy, you are likely to join BetterInvesting for about \$100/year, as of this writing, which provides you access to the content, tools and data. You may choose to join an existing club to help support your learning. You don't really need to do either, but doing all this without support, tools, content, and data is a lot harder.

If you are new to investing the first task is to identify which companies you'd like in your portfolio watch list using a strategy, like the BI methodology, defined in Part 1 of this workbook, using BI's Stock Selection Guide (SSG). Consider using the [BI 100 Index](http://www.betterinvesting.org) (www.betterinvesting.org, “Find Great Stocks”, “Top 100 Stocks ...”) for ideas. Be picky, not all are quality companies today. After finding several companies you would like in your watch list, use BI's PERT report (Part 2 of this workbook) to determine which are buys today. After completing this workbook you will understand how to proceed.

Before continuing, you may want to check out some of the free videos at the BetterInvesting website (<https://www.betterinvesting.org/learn-about-investing/free-videos>).

¹ <https://www.betterinvesting.org/about-us/our-history-of-helping-investors>

Preface

The content in this workbook is grouped by topic from beginner to advanced. This works well for reading cover-to-cover but not as well for teaching. A spiral (review) approach works better for teaching. In the BetterInvesting Puget Sound Chapter we break this material into three core classes and follow-up seminars.

History has shown this material is not mastered initially and participants usually benefit from repeating the intermediate class at least once.

Core Class 1 - Beginning Stock Selection Guide

- Chapter 1 Methodology
- Chapter 2 Forecasting Growth using Trend Analysis
- Chapter 6 Evaluating Management
- Chapter 7 Valuation High & Low P/E
- Chapter 8 Valuation Risk & Reward

Core Class 2 -Intermediate Stock Selection Guide

- Chapter 2 Forecasting Growth using Trend Analysis (Review)
- Chapter 3 Forecasting Growth using Life Cycle Analysis
- Chapter 5 Forecasting Growth using Business Modelling (Preferred Procedure)
- Chapter 6 Evaluating Management (Review)
- Chapter 7 Valuation High & Low P/E (Review)
- Chapter 8 Valuation Risk & Reward (Review)

Advanced Workshop

- Chapter 4 Forecasting Growth using Revenue Analysis

Core Class 3 – *Portfolio Management*

- Chapter 9 Portfolio Management Overview
- Chapter 10 Diversification
- Chapter 11 Quality
- Chapter 12 Valuation
- Chapter 13 Performance
- Chapter 14 Buy/Sell Decisions

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PART ONE

Stock Selection Guide (SSG) Magic

How to select stocks and manage your portfolio

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Chapter 1 METHODOLOGY

Goal

Use the Stock Selection Guide to evaluate growth companies for quality and potential return.

Objectives

Understand and explain the BetterInvesting (BI) methodology.

Understand and explain the Income Statement and its relationship with the Stock Selection Guide (SSG)

Concepts

Quality Growth Companies

Potential Return

Tools/Resources

Income Statement

Instructional Background

Investing in public companies via the stock market is a good decision historically due to its total return over time and its liquidity. Since 1926 the average bull market has delivered returns around 110% over a 5-year duration; followed by a bear market removing 24% in about 11 months.

(<http://nber.org/cycles/cyclesmain.html>) Investors understanding this market cycle have realized an average of 11% return assuming they didn't get scared during the bear market and sell at a loss.

Unfortunately, many investors are not fully informed of market cycles before they invest and find themselves buying high and selling low – a poor combination.

The BetterInvesting (BI) methodology is primarily about buying high-quality growth companies with 15% or better potential return (buy low) and selling near the top of a business cycle (sell high) when the potential return is low due to price appreciation. Experience shows this method to work about 80% of the time for quality growth companies. The most common challenges are paying too much for a company; and unwilling to sell (replace) a company after its value has appreciated and potential return is diminished. Both issues are detailed in the section on valuation.

This course is designed to help you understand the market and business cycles enough to build a portfolio of high-quality growth companies, evaluate and mitigate risk, and of course, buy low and sell high.

Methodology (cont.)

BetterInvesting (BI) methodology

1. Build wealth over the *long-term* by *investing regularly* using *dollar cost averaging*
2. In a well-managed [club] portfolio
3. Of *quality, growth* companies;
4. Judged to be consistent and predictable;
5. *Diversified* by company, sector, and growth rate;
6. With a minimum *potential portfolio return* of 15%;
7. Buying companies near the bottom of what we judge to be the company's *business cycle* (buy low)
8. Selling companies near the top of what we judge to be the company's business cycle (sell high)
9. Resulting in a *realized portfolio return* of 15% or more
10. Using BI's tools – SSG, PERT, etc.

Vocabulary

A high-quality growth company consistently and predictably grows revenue, profits, and earnings while improving, or keeping steady, profit margins, return on equity, and debt.

Long-term investing is a primary risk mitigation. The key is not selling for a loss each time the market becomes bearish. Fortunately, that happens on average every 5-years (there are exceptions like the current bull market that has gone for 10+ years and counting) and only for a relatively short time, 11 months, but a 20%+ drop, or correction, can be unnerving. The seasoned long-term investor is happy to see the market drop and present buy opportunities while the market is low.

Investing regularly is the best way to build a retirement fund over time. When the burden of funding retirement income moved from companies to individuals, this discipline is required to save enough to self-fund your retirement income.

Dollar-cost-averaging is a natural result of regular investing. When you invest every month, year-over-year, you will be investing in bull and bear markets. When the market is down, you will be buying more due to the lower prices. Regular monthly investing is always better than one-time investments simply because you are more likely to invest rather than spend the money.

Reinvesting earnings and dividends in your portfolio is required to optimize its growth. The market growth, S&P 500, earned 9.9% between 1926 and 2012; 43% of that was from dividends. (<https://dqydj.com/sp-500-return-calculator/>) This methodology is constantly selling companies when high and using all the proceeds, including dividends, to purchase other companies that are currently low. We buy and replace; not buy and hold.

We rely on compounding growth to build our retirement portfolios. Compounding growth is possible by continuously reinvesting earnings and dividends. What is hard to understand is the impact of compounding over time. For example, \$300 invested monthly at 10% annual growth for 35 years will grow in value to about \$1.1 million dollars. The total investment is \$144,000. Compounding multiplied that investment over 13 times. 15% annual growth is a typical goal. \$300 invested monthly at 15% annual growth for 35 years will grow in value to about \$4.4 million dollars!

Methodology (cont.)

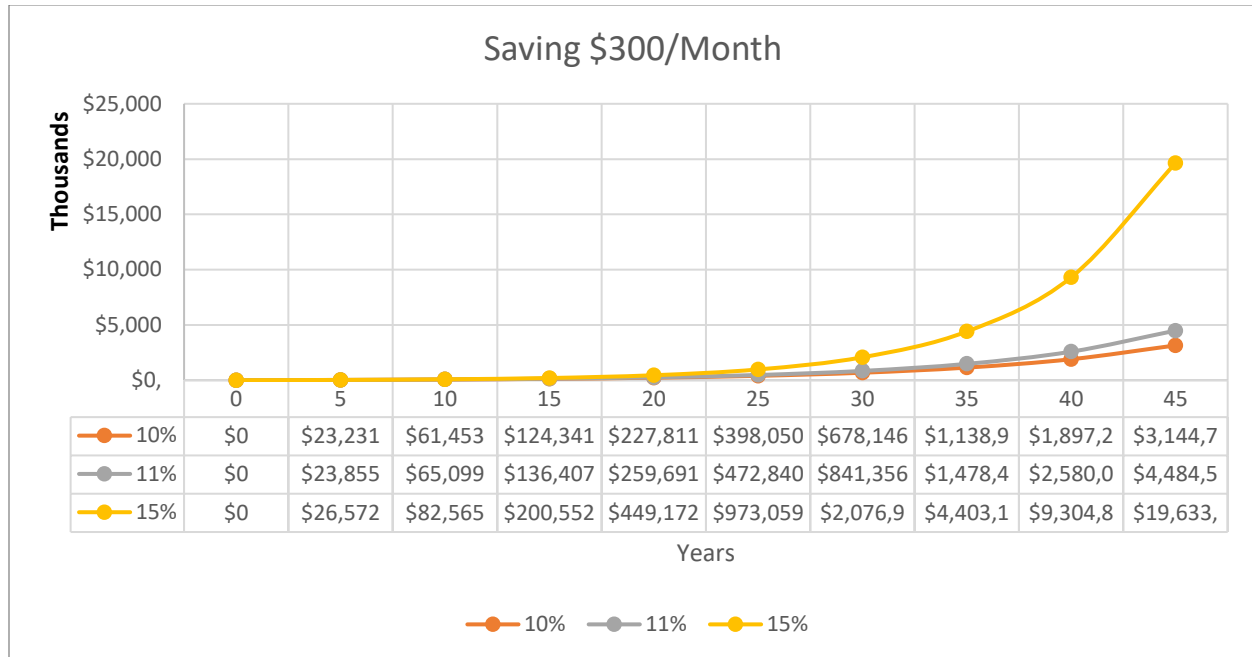


Figure 1- Compound growth (Source: Excel)

We tend to see a fee of 1% as extremely low. But over a career of investments the difference 1% makes is notable. Comparing 10% vs. 11%: only \$624 after 5 years but over \$1.3 million after 45 years. Comparing 14% vs. 15%: only \$714 after 5 years but over \$6.2 million after 45 years.

Portfolio diversification is used to limit risk by spreading it across multiple companies and sectors. It's also used to manage portfolio growth by balancing slow, medium, and fast growth companies.

All these ideas are combined into monthly portfolio management meetings combining company research and portfolio status to identify buys and sells that improve the portfolio's risk and reward.

Income Statement

Researching a company begins with a review of the company's income statement. An income statement is a snapshot of a company's profit and loss for a given timeframe, like one year. The income statement begins with revenue.

Revenue (Sales) is a total of all sources of money received such as sales, interest income, etc. For example, if a company made widgets and sold 1,000 at \$10 each their sales income would be \$10,000.

Costs account for all expenses needed to create and sell a product. Let's assume our widgets cost \$8 each to make.

Methodology (cont.)

Subtracting costs from sales; \$10,000 - \$8,000 = \$2,000, we have pre-tax profit. We still need to account for taxes. We'll assume 35% for our imaginary company, or \$700 tax. Subtracting taxes from pre-tax profit; \$2,000 - \$700 = \$1,300, net profit (earnings).

Public companies have shareholders. Let's assume our widget company has 1,000 shareholders. Our earnings must be divided among our shareholders, or, \$1,300/1,000 = \$1.30 earnings per share (EPS).

Net profit (earnings) is available to be retained and reinvested by the company to grow, or returned to the shareholders (owners) as dividends. Let's

assume our widget company will give 10% of its earnings to its shareholders as dividends, 10% x \$1.30 EPS = \$0.13 per share dividend. That leaves 90% of its earnings to be retained earnings, or 90% x \$1.30 EPS = \$1.17/share, for reinvestment in company growth.

We pay particularly close attention to three of these lines: sales, pre-tax profit, and earnings-per-share (EPS). Sales is the foundation of a company growth. We are seeking growth companies, so, sales growth is required. Since sales is the top line of the statement, it is often referred to as top-line growth. Pre-tax profit quickly shows if a company is controlling its expenses. We exclude taxes because management doesn't have complete control over taxes. Finally, earnings-per-share (EPS) is the bottom-line results that will ultimately drive the stock price of a growth company. Said another way, *sales drives earnings, earnings drives price*.

In an ideally perfect growth-company the growth rates of sales, pre-tax profit, and EPS will be equal. If sales are growing at 10%, we want pre-tax profit growing at 10%, and we want EPS growing at 10%. The Stock Selection Guide (SSG) plots sales, pre-tax earnings, and EPS for the last 10 years to allow us to see how closely these three attributes follow each other. The problem with charting 10 years of compound growth is that the lines are all curved. For example, in the linear chart below each line is growing at 15% but visually each slope is different.

Income Statement	
\$10,000	s Sales (1000 items at \$10 each)
\$8,000	- Costs (say, \$8 per item)
\$2,000	p = Pre-tax Profit
\$700	- Taxes (35%)
\$1,300	= Net Profit (Earnings)
1,000	÷ Shares Outstanding
\$1.30	e = Earnings per Share (EPS)
\$0.13	= 10% Dividend
\$1.17	= 90% Retained earnings

Figure 2- Simplified Income Statement

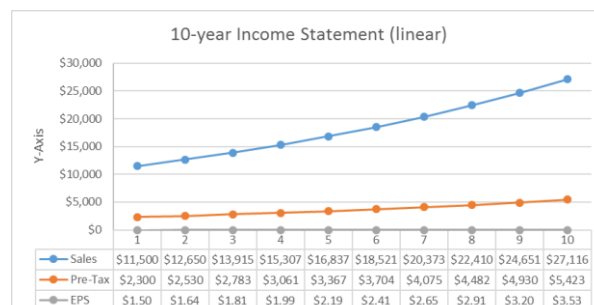


Figure 3- Linear Graph (Source: Excel)

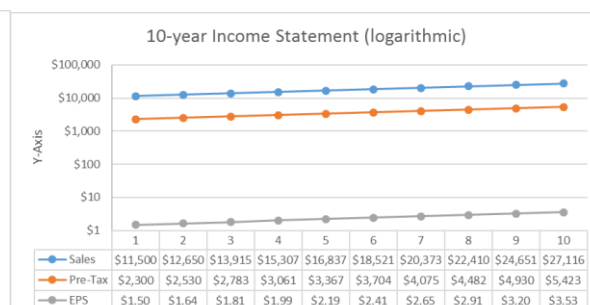


Figure 4- Logarithmic Graph (Source: Excel)

The second chart shows the three lines as perfectly parallel because the y-axis is using a logarithmic scale instead of the default linear scale in the first graph.

Methodology (cont.)

The SSG uses the logarithmic option to allow us to easily see if the growth rates of the three lines are the same or different. We have two SSG programs, Toolkit 6 (TK6) and Online SSG. The first two examples are CERN using TK6 and the Online SSG. The last 2 examples are MD shown on TK6 and the Online SSG.

Each of the four examples show sales (green), pre-tax profit (magenta), and EPS (blue) show the three lines paralleling each other well (perfect doesn't exist). We characterize each plot in three ways: (1) Are the lines straight? (2) Are they parallel? (3) Do they slope up and to the right? If they are straight, parallel, and up-to-the-right, we expect future consistency assuming no significant changes, like unexpected changes in management, or loss of biggest customer. This is our first check when looking for

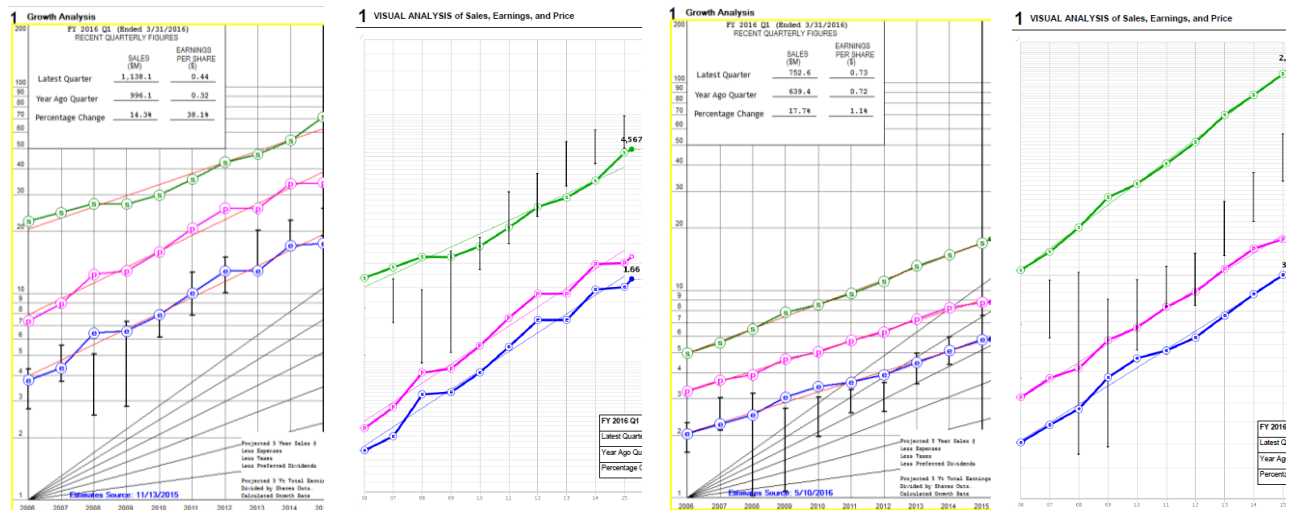


Figure 5

Sample 1-SSG CERN (Source: Toolkit) Sample 2:CERN(Source: SSG Online)
 Sample 3-MD (Source: Toolkit) Sample 4: MD(Source: SSG Online)

quality-growth companies.

A quality-growth company demonstrates consistent and predictable growth over time. We know history does not guarantee the future however we count on long-term consistent growth being predictable. (We will address profit margins, return on equity, and debt, later.)

Guided Practice

- How does the BI methodology mitigate risk of loss?
 Buying high-quality companies at a low price and holding (and even buying) through corrections and bearish markets knowing a high-quality company will recover.
- How does the BI methodology build wealth?
 Reinvesting all earnings and dividends allowing compounding to build wealth over time.
- What is the difference between “buy and hold” vs. “buy and replace”?
 “Buy and hold” sells when the money is needed. “Buy and replace” sells companies with low potential return and replaces them with companies with high potential return.

Methodology (cont.)

4. What is dollar-cost averaging?
Investing on a regular schedule regardless of market conditions buying more when the market is down and less when the market is up.
5. How long is the average bull market? How long is the average bear market? What is the growth of each?
The average bull market is 5 years, growing about 110%. The average bear market is about 1 year, falling about 24%. Holding over both the bull and bear averages to about 11% annual growth.
6. What is the primary financial document we use to evaluate a company's quality? How many years do we try to examine? What are we looking for?
We want to review 10 years of Income Statements for consistent and predictable growth.
7. How do we quickly analyze 10 years of income statements?
By charting sales, pre-tax profit, and EPS on the SSG and visually checking to see if the three lines are straight, parallel, up and to-the-right.
8. What is the definition of a quality company?
A quality company consistently predictably grows revenue, profits, and earnings while improving, or keeping steading, profit margins, return on equity, and debt.

Methodology (cont.)

Independent Practice

1. Which of the following companies would you consider to be quality-growth companies? Why?

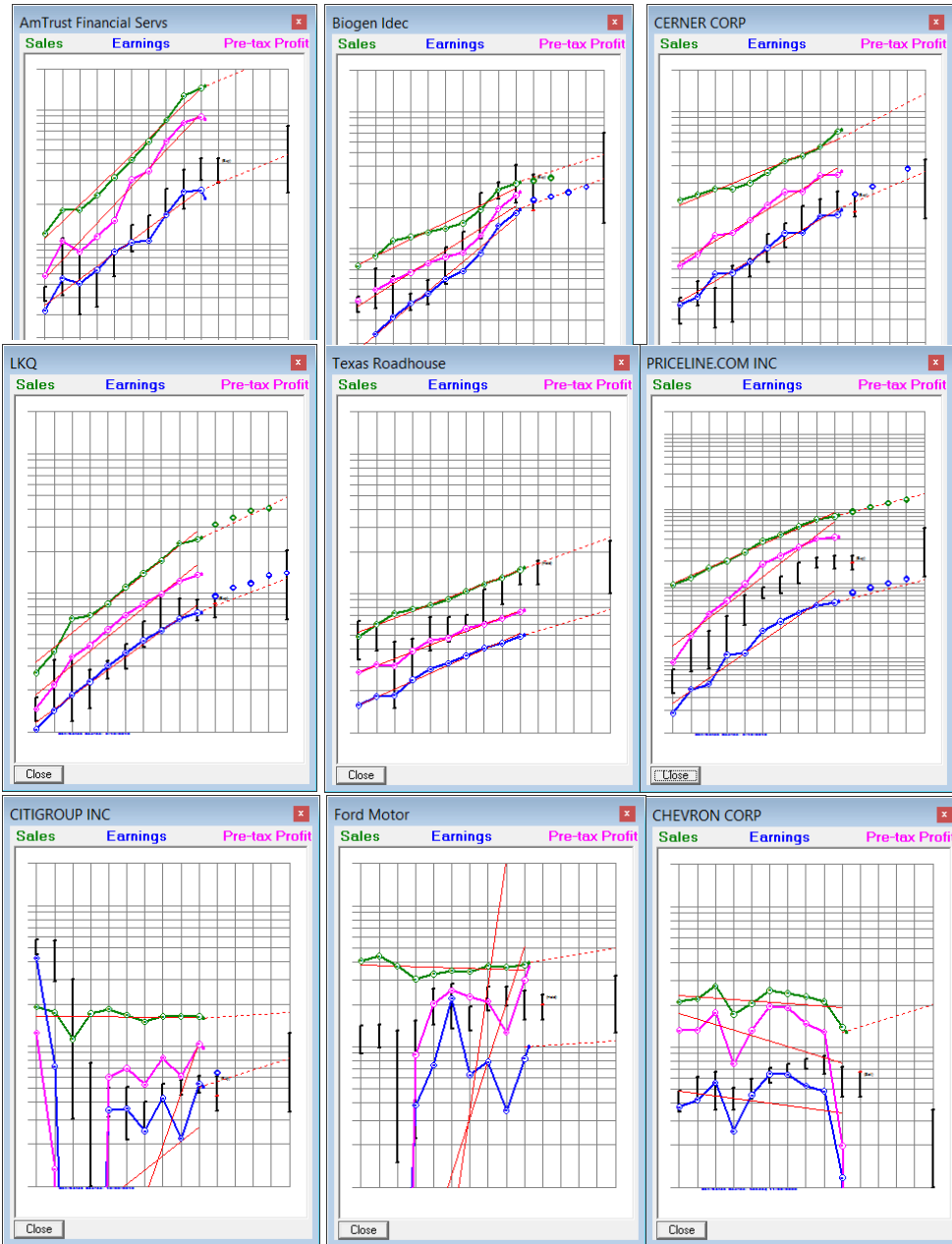


Figure 6 - Multiple SSG Section 1's (Source: Toolkit)

Methodology (cont.)

Independent Practice Answers

1. The first six all illustrate parallel, straight, up-to-the-right and could be considered consistent and predictable. However, none would be recommended without a complete study of each. The last three would be hard to call consistent and predictable but each is a major US company and under the right conditions will likely be good investments from someone not using this methodology.

Chapter 2 FORECASTING GROWTH using Trend Analysis

Goal

Use the knowledge, skills and resources needed to actively manage a portfolio of quality-growth companies to achieve a 5-year annualized return of 15% or better.

Objectives

Use history, analysts and company guidance to forecast future growth rates using trend analysis.

Concept

Trend Analysis

Tools/Resources

SSG Section 1 – Visual Analysis

Morningstar.com/Key Ratios/Growth

Zacks.com/Detailed Estimates

Finance.Yahoo.com/Analysis/Growth Estimates

Value Line/Annual Rates

SeekingAlpha.com/Earnings/Transcripts

Instructional Background

Forecasting a growth rate for sales and earnings is our objective. Trend analysis assumes past performance does predict future performance. If a company has achieved 10 years of 10% growth every year, we believe there is a good chance it will continue that trend. If the analysts have the same forecast, we have increased confidence to forecast the next 5 years' growth at 10%.

Trend growth analysis is often enough when sales, profits, and earnings have parallel growth. Business Modelling/Preferred Procedure (Chapter 5) covers the methods used to estimate growth rates when the growth rates differ.

Trend Analysis: Ideal

Here's an SSG of a fictional company. Our first step to forecast growth is reviewing historical growth. Our ideal company shows perfectly consistent growth of 10%. Sales, pre-tax-profit and earnings are all growing 10% every year. The visual result is perfectly straight and parallel lines with a 10% growth slope.

The relationship between sales and earnings is so consistent and predictable we can justify an initial forecast of 10% growth for both sales and earnings based on historical growth.

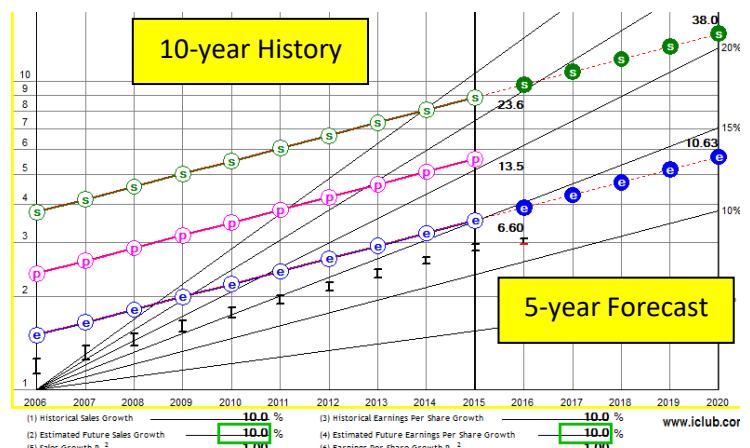


Figure 7 – Perfect (Fictional) Company (Source: Toolkit)

Forecasting Growth using Trend Analysis (cont.)

Next, we check analysts' forecasts. Our best-case scenario is that the analysts find the company continuing at 10%. We will check at least three different sources to see how consistent analysts' forecasts are. Plotting the results allows us to easily see if history and analysts are consistent.

Finally, we check for company guidance. Company guidance is often not available and if available has likely been considered by the analysts. Of course, our ideal fictional company is saying they expect to continue growing at 10%.

Forecasting a growth rate for sales and earnings is our objective. We use history, analysts, and company guidance to help us decide. In our fictional example, our company's historical growth is 10%; analysts are predicting 10%; and company guidance is for 10%. Our judgment is that this company will, on average, grow sales and earnings 10% annually over the next 5 years.

Trend Analysis: Cognizant Tech Solutions (CTSH)

Forecasting growth for a real company uses the same information: history, analysts' forecasts, and company guidance.

Cognizant Technology Solutions (CTSH) is shown on the right, figure 8. Visual analysis of historical growth for sales, pre-tax profit, and earnings all look fairly straight and parallel. We see at the bottom of the SSG the 10-year historical sales growth is 26.6%; and 23.2% for earnings.

Trend analysis allows us to take a closer look at growth rates to verify the trend as steady, increasing, or decreasing. To verify any trend, we start with history over 10, 5, 3, and 1 years to see if a trend is found. We have many sources for this breakdown, but Morningstar provides the most direct result. The result for CTSH is show below.



Figure 8 – Cognizant Technical Solutions (CTSH) Source: Toolkit

Table 1-CTSH Historic Growth (Source: Morningstar.com)

CTSH Growth	1-year (2015)	3-year	5-year	10-year
%Sales	21%	19%	22%	30%
%EPS	13%	16%	17%	25%

The trend is clearly declining from 30% to 21% for sales and 25% to 13% for earnings. We can examine the year-over-year (YOY) change to see lowest, highest, and most common (normal) annual growth rates.

Table 2-CTSH YOY Growth, low rates in red (Source: Morningstar.com)

YOY	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
%Sales	21%	16%	20%	20%	33%	40%	16%	32%	50%	61%
%EPS	13%	17%	17%	21%	20%	33%	24%	25%	49%	37%

Forecasting Growth using Trend Analysis (cont.)

Reviewing year-over-year growth for sales we find their worst years are 16% in 2009 and 2014; and for earnings, 13% in 2015 and 17% in 2013 and 2014. Giving increased weight to the most recent five years and without any judgement, we find normal (5-year average) sales has been about 22%, dipping as low as 16%; normal (5-year average) earnings is about 17% dipping down as low as 13%.

Next, look up a minimum of 3 analysts' forecasts. (Note, we have only one forecast for sales.)

Table 3- Analyst's CTSH 3-5yr EPS Forecast

EPS Forecasts Source	3-5yrs
Nasdaq.com	14%
Morningstar (Toolkit & Online SSG)	14%
Yahoo.com	14%
Value Line	13% (EPS) 13% (Sales)

Analysts are showing earnings growth forecast between 13%-14% for the next five years.

Company guidance, if available, will be found embedded in analyst's comments or on the company's website. No company guidance is currently available for CTSH.

We normally have only history and analysts' forecasts to make our judgments for sales and earnings growth. Combining everything we have provides lower and upper limits based on available research. Your final judgment relies on your risk tolerance and confidence to make a final selection. Any selection within the defined ranges is justifiable.

Table 4-CTSH Combined Historic and Analyst's Annual Growth

CTSH Growth	History		Analysts	Company Guidance	Combined Range
	Norm	Low	3-5 years	NA	
Sales	22%	16%	13%	NA	13%-20%*
Earnings	17%	13%	13%-14%	NA	13%-17%

*Limited to 20%

You can easily divide these ranges by 3 to help narrow your choices:

Table 5-CTSH 5yr Growth Estimates grouped by Risk

CTSH Growth	Low Risk	Medium Risk	High Risk
Sales	13%-15%	16%-18%	19%-20%
Earnings	13%-14%	15%-16%	16%-17%

You may choose to limit either the top or bottom of combined ranges to reflect your risk tolerance, rates so high or so low you believe them unlikely to occur again. BetterInvesting recommends limiting

Forecasting Growth using Trend Analysis (cont.)

growth forecasts to 15% or 20% just because it is so difficult for company to maintain those rates. We may exclude growth rates recorded during the Great Recession (2008-2009) for similar reasons.

Now you choose your forecast sales and earnings growth rates. Your choice (judgment) will be influenced by your risk tolerance and experience. If you're not sure, start with low risk. Once finished, change the earnings forecast to medium risk and review the changed results; then high risk and review the results.

Methodology Steps

The steps used to forecast a company's sales and earnings growth rate are:

1. Open your SSG in TK6 or the Online Tool.
2. Select Research/Key Statistics/Morningstar Key Ratios. Scroll below and select the Growth tab.
3. Record the most recent 1-year (Year over Year), 3-year, 5-year and 10-year growth rates for Revenue and EPS. Note if growth rates are trending up, down, or stable.
4. Review 1-year (year-over-year) growth rates for the last 10 years and note how low those rates commonly dip. Consider ignoring unusual events like the Great Depression (2008-2009). Record the normal growth rates and normal low growth rates. Close Morningstar.
5. Record analyst's sales and earnings forecasts. Record the range to get a sense of consistency using...
(Online SSG Only) Select **Research/Analyst Estimates/**
 - (1) Morningstar Analyst Consensus Estimates
 - (2) Reuters Analyst Consensus Estimates
 - (3) Yahoo Analyst Estimates (data from Reuters)
 - (4) Zacks Detailed Estimates
(TK6 Only) Select
 - (1) Estimated Future Earnings Per Share Growth (bottom of SSG Section1) for Morningstar 5-year EPS growth estimate
 - (2) Web/*Reuters Company Overview/Analysts
 - (3) Web/*Yahoo! Finance Company Profile /Analysis
 - (4) Web/*Zacks Company Profile/Detailed Estimates (left side)
6. Review the most recent earnings call for any company guidance. Record if available.
 - (1) www.seekingalpha.com /<Ticker> search/Earnings/Transcripts
7. Consolidate history, analyst's estimates, and company guidance by range.
8. Break the consolidated range into 3 ranges: low, medium, and high risk.
9. Select sales and earnings growth rates based on your risk profile.

Guided Practice

1. What information and technique will we use to forecast sales and earnings growth?
Trend analysis using history, analysts' forecasts, and company guidance.
2. What resources will we use to complete a trend of historical growth analysis?
SSG Section 1 and Morningstar.com/Key Ratios/Growth
3. Does trend analysis assume past performance will predict future performance?
Yes.

Forecasting Growth using Trend Analysis (cont.)

- How do we analyze historical growth?
We compare 1, 3, 5, and 10-year average growth rates with lowest YOY growth rates, analysts' forecasts, and company guidance. We combine the results into high-low ranges and finally select a sales and earnings growth based on our risk tolerance.
- Which long-term analysts' forecast are hardest to find?
Sales. Value Line is the most consistently available.
- What factors increase your confidence in your selected SSG sales and earnings growth forecast?
Straight lines on the SSG. A narrow range of analyst's forecasts. Consistent results between history, analysts' forecasts, and company guidance.

Independent Practice

- Conduct a trend analysis for IPG Photonics (IPGP).

Resources:



Figure 9-IPGP SSG (Source: Toolkit)

Forecasting Growth using Trend Analysis (cont.)

Key Ratios

	Profitability	Growth	Cash Flow	Financial Health	Efficiency Ratios										
					Latest Qtr	2015-12	2014-12	2013-12	2012-12	2011-12	2010-12	2009-12	2008-12	2007-12	2006-12
Revenue %															
Year over Year		4.17	17.07	18.80	15.20	18.56	58.55	60.98	-18.85	21.41	31.73	48.60			
3-Year Average		—	17.01	17.51	29.38	44.64	27.47	16.62	9.08	33.45	45.94	61.92			
5-Year Average		—	24.67	32.87	23.12	24.42	27.07	25.43	25.09	46.68	53.44	40.15			
10-Year Average		—	25.05	28.92	34.38	38.17	33.45	—	—	—	—	—			
Operating Income %															
Year over Year		-14.63	20.54	30.08	4.43	19.01	118.31	787.72	-84.17	23.47	28.66	152.11			
3-Year Average		—	17.87	17.37	39.47	184.65	45.32	20.18	-36.87	58.80	147.38	—			
5-Year Average		—	33.59	99.16	30.70	35.15	37.28	41.28	24.24	—	—	—			
10-Year Average		—	37.38	57.30	—	—	—	—	—	—	—	—			
Net Income %															
Year over Year		—	20.81	28.67	7.43	23.14	118.11	896.33	-85.22	22.61	2.26	293.60			
3-Year Average		—	18.64	19.40	42.36	199.10	47.56	21.78	-42.98	70.26	145.84	—			
5-Year Average		—	35.01	105.88	33.56	37.14	32.14	48.70	21.92	—	—	—			
10-Year Average		—	41.69	58.43	—	—	—	—	—	—	—	—			
EPS %															
Year over Year		-14.81	19.53	27.61	5.69	16.60	113.27	841.67	-84.81	21.54	150.00	62.50			
3-Year Average		—	17.25	16.29	38.00	186.09	45.03	20.24	-22.72	70.28	302.07	—			
5-Year Average		—	32.01	99.48	30.32	34.02	56.10	47.84	64.38	—	—	—			
10-Year Average		—	39.70	81.08	—	—	—	—	—	—	—	—			

Figure 10 - IPGP Historic Growth (Source: Morningstar.com)



Figure 11 -IPGP EPS Forecast (Source: NASDAQ.COM)

Forecasting Growth using Trend Analysis (cont.)

Figure 12- IPGP EPS Forecast (Source: Toolkit)

Growth Estimates	IPGP	Industry
Current Qtr.	5.10%	0.52
Next Qtr.	6.10%	0.66
Current Year	2.00%	0.16
Next Year	12.60%	0.29
Next 5 Years (per annum)	12.00%	0.18
Past 5 Years (per annum)	14.92%	N/A

Figure 13 – IPGP 5-yr EPS Forecast (Source: Finance.Yahoo.com)

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '13-'15 to '19-'21
Sales	--	23.5%	9.0%
"Cash Flow"	--	32.5%	10.5%
Earnings	--	41.0%	11.0%
Dividends	--	--	Nil
Book Value	--	28.5%	17.0%

Figure 14-IPGP Value Line (Jul 2016)

History:

IPGP Growth	1-year	3-year	5-year	10-year
%Sales				
%EPS				

YOY	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
%Sales										
%EPS										

Forecasting Growth using Trend Analysis (cont.)

IPGP EPS Forecasts	3-5yrs
Nasdaq.com	
Morningstar (Toolkit)	
Yahoo.com	
Value Line	(EPS) (Sales)

Consolidated Results:

IPGP Growth	History		Analysts 3-5 years	Combined Range
	Norm	Low		
Sales				
Earnings				

Risk ranges:

IPGP Growth	Low Risk	Medium Risk	High Risk
Sales			
Earnings			

Your judgement:

Selected Sales Growth:

Selected EPS Growth:

2. How confident are you in your selected growth rate? Explain.

Independent Practice Answers

1. Trend Analysis for IPGP.

History:

IPGP Growth	1-year	3-year	5-year	10-year
%Sales	17%	17%	25%	25%
%EPS	20%	17%	32%	42%

YOY	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
%Sales	17%	19%	15%	19%	59%	61%	-19%	21%	32%	49%
%EPS	20%	28%	6%	17%	113%	842%	-85%	22%	150%	63%

IPGP EPS Forecasts	3-5yrs
Nasdaq.com	19%*
Morningstar (Toolkit)	12%
Yahoo.com	12%
Value Line	11% (EPS) 9% (Sales)

**Ignored as an outlier*

Consolidated Results:

IPGP Growth	History		Analysts 3-5 years	Combined Range
	Norm	Low		
Sales	17%	15%	9%	9%-17%
Earnings	17%	6%	11%-12%	6%-17%

Forecasting Growth using Trend Analysis (cont.)

Risk ranges:

IPGP Growth	Low Risk	Medium Risk	High Risk
Sales	9%-11%	12%-14%	15%-17%
Earnings	6%-9%	10%-13%	14%-17%

Your judgement:

Selected Sales Growth: (any choice between 9% - 17%)

Selected EPS Growth: (any choice between 6% - 17%)

- Confidence should increase with increased consistency of year-over-year growth; consistent recent 3 to 5-year history; consistency between recent history and analyst's expectations; and a narrow range of analyst's predictions. 6% to 19% is wide and doesn't command confidence. 11% to 19% for analysts is more encouraging but inconsistent with the last two years: 20% and 28%. The most encouraging number is the lowest sales of 17% and 15% since 2009.

Sales is often a more stable number for growth than earnings and the primary predictor of earnings growth when using an income statement business model (preferred procedure).

Challenge

- Complete a trend analysis on the newest and oldest holding in your [club] portfolio and present your findings.

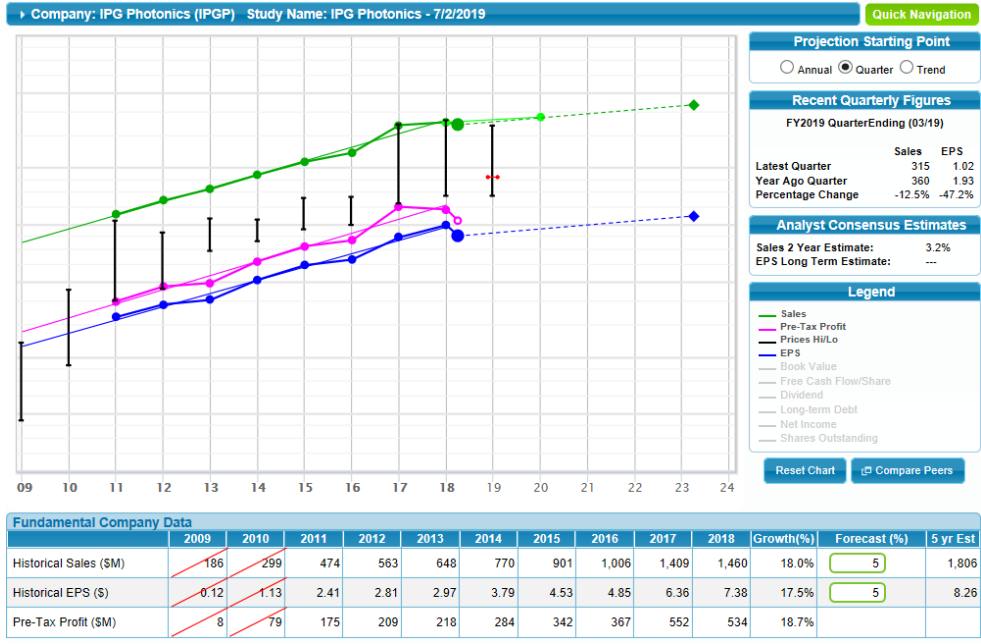
Two Years Later

How did earnings estimates match two years later for CTSH and IPGP?

- CTSH YOY EPS grew -4% in 2016, -1% in 2017 and 42% in 2018. (3-year = 11%)
- IPGP YOY EPS grew 7% in 2016, 31% in 2017 and 16% in 2018 (3-year = 18%)



Forecasting Growth using Trend Analysis (cont.)



Chapter 3 FORECASTING GROWTH using Life Cycle Analysis

Goal

Use the knowledge, skills and resources needed to actively manage a portfolio of quality-growth companies to achieve a 5-year annualized return of 15% or better.

Objectives

Use life cycle analysis with the strategic growth plan to forecast sales growth.
Combine trend analysis with life cycle analysis to select earnings growth.

Concepts

Company Life Cycle
Strategic Growth Plans

Tools/Resources

www.SecFilings.com

Instruction Background

Selecting an estimated growth rate for sales and earnings is our objective, same as the previous lesson. However, we will examine sales (top line) growth history and expectations to better understand how that growth will be created and evolve over time.

Company Life Cycle

Forecasting growth begins by understanding the life cycle of a successful company and which phase of its life cycle that company is currently in. Each stage of the life cycle helps us narrow our expectations to growth rates consistent with that stage.

New companies begin in the startup phase. A successful company will have high, or explosive, growth rates. Starting with no sales, any sales will easily result in astronomical sales growth. The startup phase is not expected to be profitable. Earnings growth doesn't begin until the company is beginning to show a profit as the company pushes past the break-even point and starts reporting positive earnings and enters the explosive growth phase.

BetterInvesting requires a minimum of 5 years of positive earnings growth before the company can be considered a quality company. Once a company has sufficient history to prove its continued viability, BetterInvesting investors seek these smaller companies with high growth (12%+) for their higher returns. These small-sized companies are expected to compose about 25% of a properly diversified BetterInvesting portfolio.

Growth rates will eventually slow as a company continues to grow and eventually enters the mature growth phase. We expect companies in this phase to have revenues between \$500 million and \$5

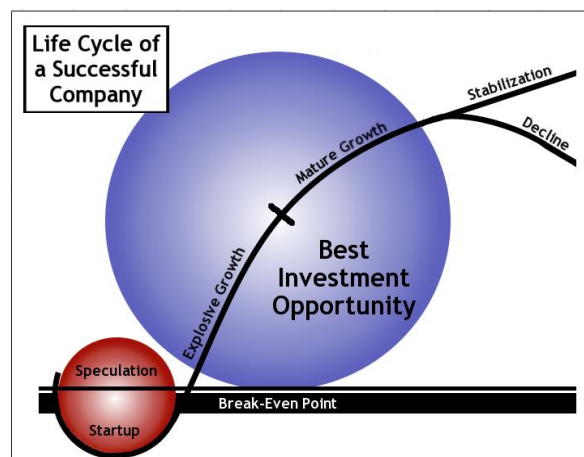


Figure 15 - Life Cycle of a Successful Company (Source: ICLUB Central)

Forecasting Growth using Life Cycle Analysis (cont.)

billion and growth between 7% and 12%. These mid-sized companies are expected to compose about 50% of a properly diversified BetterInvesting portfolio.

Eventually, as market share is captured, markets change and products begin to age, we expect sales to slow and either stabilize around 5%-7% or continue to decline and be discontinued. Large companies earning 7%-10% with stable products and continued demand usually provide dividends to help entice investors to buy and hold their company. These large, slower-growth companies are also in demand by BetterInvesting investors as low-risk holdings. These large-sized companies are expected to compose about 25% of a properly diversified BetterInvesting portfolio.

Table 6 - Life Cycle, Annual Revenue, Growth Rate, and Risk

Life Cycle/Revenue	<\$1B	\$1B-\$10B	>\$10B
Explosive Growth	12%+ growth High risk	Expect slowing High risk	Expect slowing High risk
Mature Growth	Avoid	7-12% growth Med risk	Expect slowing Med risk
Stable Growth	Avoid	Avoid	5%-7% growth Low risk

The average company will realize slower growth as it gets larger, but some companies seem to defy the weight of their own size due to their ability to keep introducing better products. Successful companies are constantly improving existing products and adding new products to continue growing. Each product has its own lifecycle resulting in a continued renewal of growth with new or improved products. When a company has a history of excellent new product pipeline management, we find higher than expected growth rates supporting larger companies and for a longer time. Companies over-performing or under-performing compared to their size are always a part of our portfolio and should reflect more or less growth based on size, performance, and new product pipeline management.

The historical sales growth rate identifies which phase a company is in. The size of a company sets our expectation of the risk of slowing growth. The company's history of new product pipeline management and success influences our confidence of continued or reduced future growth rates.

Trend analysis, in part 1, for Cognizant Technologies (CTSH) used its 5-year average growth rate as a measure of its normal growth rate, measured at 22% for sales. We expect companies in the explosive phase to be small (< \$500M revenue) companies growing at 12%+. CTSH has an annual revenue of \$12 billion which would classify this company as a larger, slow-growth company growing 5-7%. We can hope CTSH will continue to grow at 22% but need to be wary of being too optimistic since it will require over twice as much growth as a typical company of their large size. This mismatch of size and growth rate will eventually drag the forecast below its current rate. BI conventional wisdom will limit the growth forecast to 15%. Your personal risk profile may choose an even lower value.

Strategic Growth Plans

The strategic growth plans of a company will reveal their expectations for future growth and setting investor's expectations of the company's life cycle path. Plans that set clear expectations for continued expansion and product development is necessary to avoid slowing growth and lost market share as a company slips from explosive growth into mature growth with growth rates at 10% or below.

Forecasting Growth using Life Cycle Analysis (cont.)

The company life cycle is defined by its sales growth. However, company sales growth is defined by the growth rates of each of its products and services. The result is manifest in a growth company beginning the life cycle over and over with each new product or product upgrade. A full understanding of a company requires an understanding of the life cycle of each product line or business segment. As you review products or services watch closely for the release of new products and services and how they are being received by their customers.

A company's strategic growth plans are detailed in the "Management's Discussion and Analysis of Financial Condition and Results of Operations" (MD&A) section of their most recent annual report. When reading the MD&A comments, their plans should make sense to you. Often, a company will include public presentations on their public websites under the Investor Relations section. These presentations often embellish and enhance our understanding the MD&A.

Occasionally, (Enron) a company attempting to game the system will attempt to obfuscate their plans. If the MD&A does not make sense – walk away. When finished reading a growth plan make sure you can identify how the company plans to grow their business.

Here are some excerpts from CTSI 2015 Annual Report, MD&A.

Our clients engage us to help them operate more efficiently, provide solutions for critical business and technology problems, and to help them drive technology-based innovation and growth. Our core competencies include: business, process, operations and IT consulting, application development and systems integration, enterprise information management, application testing, application maintenance, IT infrastructure services, and business process services. We tailor our services to specific industries and utilize an integrated global delivery model. This seamless global sourcing model combines industry-specific expertise, client service teams based on-site at the client locations and delivery teams located at dedicated near-shore and offshore global delivery centers.

During 2016, barring any unforeseen events, we expect the following factors to affect our business and our operating results:

- *Demand from our customers to help them meet their dual mandate of achieving cost savings while investing in transformation and innovation;*
- *Continued focus by customers on directing IT spending towards cost containment projects, such as application maintenance, infrastructure services and business process services;*
- *Secular changes driven by evolving digital technologies and regulatory changes;*
- *Volatility in foreign currency rates; and*
- *Continued uncertainty in the world economy.*

In response to this environment, we plan to:

- *Continue to invest in our talent base and new service offerings including digital technologies and new delivery models;*
- *Partner with our existing customers to garner an increased portion of our customers' overall IT spend by providing innovative solutions;*
- *Focus on growing our business in Europe, the Middle East, the Asia Pacific and Latin America regions, where we believe there are opportunities to gain market share;*
- *Increase our strategic customer base across all of our business segments;*

Forecasting Growth using Life Cycle Analysis (cont.)

- *Opportunistically look for acquisitions that may improve our overall service delivery capabilities, expand our geographic presence and/or enable us to enter new areas of technology;*
- *Focus on operating discipline in order to appropriately manage our cost structure; and*
- *Locate most of our new development center facilities in tax incentivized areas.*

CTSH plans to grow geographically outside the US; work to capture increased market share with existing customers by growth of core competencies with new services; more talent; partnering; and acquisitions. They plan to reduce expenses with increased operating discipline and developing new facilities with tax incentives.

This makes sense. When reading news stories about CTSH we know exactly what we're looking for – anything that enhances or detracts from these goals. Everything else is chafe.

Including Life Cycle Analysis

We add these results to our historical trend analysis, analysts' forecasts; CTSH continues to demonstrate explosive growth (15%+) but the company size (\$12B) is large which will likely slow growth over time. Now we use all this information to select a sales growth rate that agrees with our personal risk profile and provides confidence that the selection is realistic and achievable.

Table 7 - CTSH Growth - History, Analysts & Life Cycle

CTSH Growth	History		Analysts	Life Cycle	Combined Range
	Norm	Low	3-5 years	Explosive (12%+)	
Sales	22%	16%	13%	Expect slowing	13%-15%*
Earnings	17%	13%	13%-14%		13%-17%

**Limited to 15% due to company size (large) mismatch with explosive growth phase but not lower due to a solid strategic growth plan.*

This addition significantly narrows our choices and improves confidence for sales growth.

Table 8 - CTSH Growth Forecast by Risk

CTSH Growth	Low Risk	Medium Risk	High Risk
Sales	13%	14%	15%
Earnings	13%-14%	15%-16%	16%-17%

Guided Practice

1. What are the four phases of a successful company?
(1) Startup, (2) Explosive, (3) Mature, (4) Stabilization or Decline
2. Which phases does BetterInvesting tend to seek and for what expected growth rates?
(1) Explosive, 15%+ growth; (2) Mature, 10-15%; and (3) Stable, 7-10%.
3. How does the size (based on revenue) of a company impact life cycle analysis?
Size tends to increase or decrease risk of continued growth at a particular growth rate. Smaller companies with higher growth are always higher risk of reduced growth than a company

Forecasting Growth using Life Cycle Analysis (cont.)

established in the market. Larger companies with high growth rates are also at higher risk of reduced growth due to the larger revenue required for higher growth.

4. What is the primary contributor to changes in a company's life cycle?
New and aging products. Successful companies are continuously replacing or improving older products. Consequently, the company life cycle is an aggregate of each product life cycle. Successful products have longer lives in explosive and mature phases, while less successful products proceed more quickly to maturity, decline and discontinuation.
5. Can a company have products across all phases of the life cycle?
Yes, a successful company wants products in every phase. Drug companies provide the most visibly vulnerable products due to expiration of patents which is why the new product pipeline is so important for long term investors to monitor.
6. How do we use company life cycle to evaluate future growth?
The historical sales growth rate identifies which phase a company is in. The size of company sets our expectation of the risk of slowing growth. The company's history of new product pipeline management and success influences our confidence of continued or reduced future growth rates.
7. What is a company's strategic growth plan and where will you normally find it?
A company's strategic growth plan explains how they will continue to grow the company. The plan will normally explain how they will improve their products and services with organic and/or acquired resources; how and where they will maintain and/or expand their customer base; and how they plan to control expenses. This information is expected to be in a company's annual report in the Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A) section.
8. Why is it important to understand a company's strategic growth plan?
We buy growth companies. If a company's growth plan doesn't seem achievable or does not make sense – don't buy it! We base a company's quality on its ability to achieve estimated growth. News provides such a deluge of information about a company we need to know how to filter irrelevant information. The strategic growth plan identifies what we need to monitor. Any news that doesn't impact the growth plan is not that important. News that potentially supports or hinders the growth plan is important. We will adjust growth rates over time based on events that change our growth expectations.

Independent Practice

1. What life cycle phase is IPG Photonics (IPGP) in? Explain.
2. What is IPG Photonics' strategic growth plan?
3. Does IPG Photonics' strategic growth plan reveal new products or services to be used to grow the company?

Independent Answers

1. IPGP's life cycle is defined by its sales amount and sales growth trend. Its sales growth has slowed from 25% (10-yr average) to 17% in 2015 and 3-yr average. IPGP is still in its explosive

Forecasting Growth using Life Cycle Analysis (cont.)

growth phase but clearly showing signs of transition as the company grows.

IPGP's 2015 annual sales was \$901 million which classifies the company as medium sized based on revenue (between \$500M and \$5B). We expect medium sized company to be growing 10%-15% as their older products begin to show slower more mature growth and they continue to introduce newer explosive growth products to the market while the company transitions from its younger less stable explosive growth phase to an increasingly stable mature growth phase.

- IPGP's strategic plan is identified in its annual plan in the MD&A section.

IPG Photonics Corporation develops and manufactures fiber lasers, fiber amplifiers, and diode lasers that are primarily used for materials processing, advanced communications, and medical applications. Its major manufacturing facilities are located in the U.S., Germany, and Russia. The Company's vertically integrated manufacturing provides significant competitive advantages and enhances its ability to meet customer requirements, manage costs and improve performance. IPG Photonics is based in Oxford, Massachusetts with additional manufacturing facilities in Germany, Italy and Russia, and regional sales offices in Detroit, Silicon Valley, China, France, India, Japan, Korea, Singapore and the U.K.

(Vertically integrated manufacturing means ownership of as many parts of a supply chain as possible which explains the strategy of both organic R&D seeking patent and first-mover advantages plus acquisition of supply chain companies defined as part of their strategic dependence.)

- Does IPG Photonics' strategic growth plan reveal new products or services to be used to grow the company?

The following slide was included during IPGP's 2016 Investor Day, 5/11/2016 addressing their future products and services.

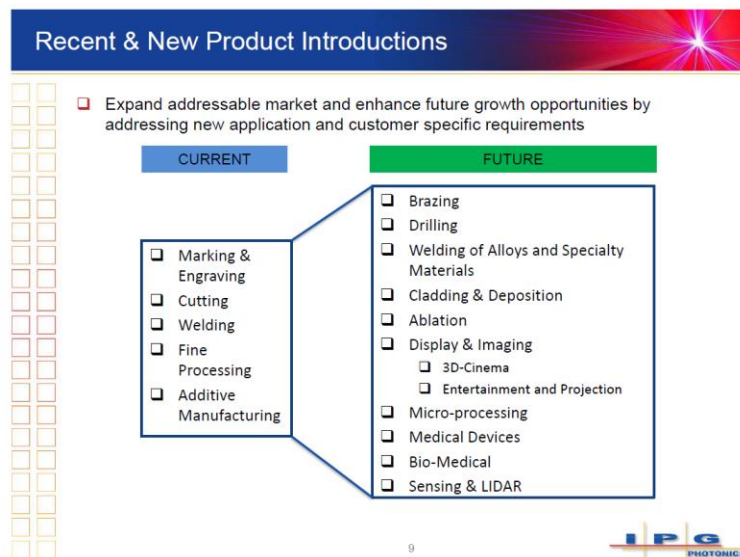


Figure 16 - IPGP Recent & New Products for 2016 Investor Day (Source: [IPGP Investor Relations](#))

Forecasting Growth using Life Cycle Analysis (cont.)

Challenge

1. Complete a life cycle and strategic growth analysis on the newest and oldest holding in your [club] portfolio and present your findings.

Chapter 4 FORECASTING GROWTH using Revenue Analysis

Goal

Use the knowledge, skills and resources needed to actively manage a portfolio of quality-growth companies to achieve a 5-year annualized return of 15% or better.

Objectives

Use product lines (segments) to forecast sales growth.

Concepts

Revenue Segments

Tools/Resources

Revenue Analysis ([Excel Template](#))

Instruction Background

We know a company's life cycle is defined by each product/service life cycle. Measuring the revenue growth of each product/service is available in a company's annual report in the financial notes where they report results broken down by geography and business segments. We use this information to identify maturing products, the progress of new products, and deepen our understanding and awareness of how and where the company is growing.

Revenue Segments

Revenue is the foundation of growth so when consolidated revenue results leave you with a low confidence of future sales growth, you can use the annual report to break down revenue by business segment and geography to get a better understanding where revenue is coming from and growth rates of both elements. Revenue by segment for CTSH was found in "Note 15 – Segment Information."

Table 9 - CTSH Revenue Analysis 2013-2015 by Segment and Geography (Source: CTSH 2015 Annual Report, Excel Template)

Actuals from Annual Report					
CTSH 2013-15	2013	2014	2015	% 2015	3-yr Gr
Financial Services	3,718	4,286	5,003	40%	16%
Healthcare	2,265	2,689	3,668	30%	27%
Manufacturing/Retail/Logistics	1,868	2,094	2,344	19%	12%
Other	993	1,194	1,402	11%	19%
Total	8,843	10,263	12,416	100%	18%
YOY Growth		16%	21%		

CTSH 2013-15	2013	2014	2015	% 2015	3-yr Gr
North America	6,860	7,880	9,759	79%	19%
Europe	1,579	1,884	2,008	16%	13%
Rest of World	404	499	648	5%	27%
Total	8,843	10,263	12,416	100%	18%
Source: 2015 10-K Note 15	User Entry				

Forecasting Growth using Revenue Analysis (cont.)

Revenue analysis by business segment and geography explains how and where revenue is achieved. 80% of revenue is from North America and 60% of that revenue is from Financial Services and Healthcare with Healthcare growing almost twice as fast as Financial Services. As we read the news and factor in industry growth estimates we may want to modify growth estimates.

We can use this to model revenue growth and use our own economic expectations to forecast future revenue growth. Unlike analysts' estimates for a company's growth, adjusting growth rates by business segment is the result of product news and your impression how a segment will grow based on broader economic reports. Adjust the future growth rates up or down based on your overall expectations with a focus on finding rates that increase your confidence in the final outcome.

CTSH derives most of their revenue from North America, by location, and much from financials and healthcare, by industry. The general health and news of those sectors makes me want to be less aggressive and more cautious with 2016 and 2017 growth which feels like flatter growth than achieved the last few years. Historical trend analysis revealed declining growth, but sales still stayed between 16% and 21% for the last 5 years. The lowest growth rate over the last 10 years is 16%. My confidence will be improved by not exceeding 20% and holding the next two years to a maximum of 15%. The result below is 16% which is the top of my medium risk range from trend analysis.

Table 10 - CTSH Revenue Analysis: User Growth Estimates by Year (Example)

CTSH 2013-15	2015	2016	2017	2018	2019	2020
Financial Services	16%	15%	15%	16%	16%	16%
Healthcare	27%	15%	15%	20%	20%	20%
Manufacturing/Retail	12%	10%	10%	10%	10%	10%
Other	19%	15%	15%	15%	15%	15%

User Entry

Table 11 - CTSH Revenue Analysis: Calculated Revenue Estimates by Year (Example)

CTSH 2013-15	User's Estimated Annual Revenue						5-yr Gr
	2015	2016	2017	2018	2019	2020	
Financial Services	5,003	5,753	6,616	7,675	8,903	10,327	16%
Healthcare	3,668	4,218	4,850	5,820	6,984	8,381	19%
Manufacturing/Retail/Logistics	2,344	2,578	2,836	3,120	3,432	3,775	10%
Other	1,402	1,612	1,854	2,132	2,452	2,819	15%
Total	12,416	14,161	16,156	18,747	21,771	25,303	16%
YOY Gr		14%	14%	16%	16%	16%	

Regionally, CTSH is dominated by North American sales. But 16% comes from Europe and, with BREXIT still unfolding, I need to reduce EU growth for 3 or 4 years to allow the completion of BREXIT and trade relations to stabilize in EU. To increase my confidence in the long term forecast, I'm limiting North America to 15%, knowing 16% is the lowest in the last 10 years; dropping European growth to 8% for the next 3 years and growing slowly for the last two years; limited the rest of the world to 15% knowing CTSH is a large company and analysts are forecasting 13%. The result below is 14%.

Forecasting Growth using Revenue Analysis (cont.)

Table 12 - CTSH Revenue Analysis: User estimates of Geographic Growth by Year (Example)

CTSH 2013-15	2015	2016	2017	2018	2019	2020
North America	19%	15%	15%	15%	15%	15%
Europe	13%	8%	8%	8%	9%	12%
Rest of World	27%	15%	15%	15%	15%	15%
Total		User Entry				

Table 13 – CTSH Revenue Analysis: Calculated Revenue Estimates by Geography and Year w/Calculated 5-yr Growth (Example)

CTSH 2013-15	User's Estimated Annual Revenue						5-yr Gr
	2015	2016	2017	2018	2019	2020	
North America	9,759	11,223	12,907	14,843	17,069	19,630	15%
Europe	2,008	2,169	2,342	2,530	2,757	3,088	9%
Rest of World	648	746	858	986	1,134	1,304	15%
Total	12,416	14,138	16,107	18,359	20,961	24,022	14%

We add these results to our historical trend analysis, analysts' forecasts and select a sales growth rate that agrees with our personal risk profile and provides confidence that the select is realistic and achievable.

Table 14 - CTSH Growth History, Analysts Estimates, Life Cycle, and Revenue Analysis (Example)

CTSH Growth	History		Analysts	Life Cycle	Revenue Analysis	Combined Range
	Norm	Low	3-5 years	Explosive (15%+)		
Sales	22%	16%	13%	Expect slowing	14-16%	13%-15%*
Earnings	17%	13%	13%-14%			13%-17%

*Limited to 15% due to company size (large) mismatch with explosive growth phase but not lower due to a solid strategic growth plan.

This addition does not change the range for sales but significantly increases confidence.

Table 15 - CTSH Combined Growth Analysis broken down by Risk (Example)

CTSH Growth	Low Risk	Medium Risk	High Risk
Sales	13%	14%	15%
Earnings	13%-14%	15%-16%	16%-17%

Forecasting Growth using Revenue Analysis (cont.)

Guided Practice

1. What are revenue segments in a revenue analysis?
The SSG provides an analysis of consolidated revenue. A revenue analysis breaks down revenue by product lines and geographies.
2. Why would we bother with a revenue analysis?
When we read about products or geographies under economic stress we want to know if those changes should be reflected in our estimated growth rates. If the product under stress is in its declining life cycle and represents only a small percent of total revenue in an impacted geography, we may choose to not change our forecast. If the product and/or geography is a larger portion of revenue an adjustment may be needed. A revenue analysis will reveal the amount of adjustment to consolidated growth is appropriate.

Independent Practice

1. Which business segment provides most of IPG Photonics' revenue? What is that percent of total for 2015?
2. Which geography provides most of IPG Photonics' revenue? What is that percent of total for 2015?
3. If we assume, after reading about IPG Photonics, a growth rate of 15%, 15%, 18%, 20% and 20% for Materials Processing and a growth rate for Other Applications of 12%, 15%, 15, 15%, and 15% what would we forecast the 5-year segment growth rate?
4. If we assume, after reading about the global economy, a growth rate of 5% for North America, 10% for Germany, 12% for Other (Europe), 5% for Japan, 15% for China, 25% for Other (Asia) and 50% for Rest of World, what would we forecast the 5-year segment growth rate?
5. What are your judgment options from your consolidated trend, revenue, analysis?

Independent Answers

1. IPGP has two business segments: materials processing and other applications. Materials processing provided 94% of their 2015 revenue.

Forecasting Growth using Revenue Analysis (cont.)

Table 16 - IPGP Revenue Analysis using Excel Template (Data from IPGP 2015 Annual Report)

Actuals from Annual Report					
IPGP 2013-15	2013	2014	2015	% 2015	3-yr Gr
North America	116,935	113,233	131,525	15%	6%
Europe					
Germany	65,147	77,404	93,802	10%	20%
Other	140,279	173,018	189,123	21%	16%
Asia & Australia					
Japan	67,981	72,573	76,033	8%	6%
China	192,134	245,102	311,946	35%	27%
Other	64,346	85,426	95,494	11%	22%
Rest of World	1,212	3,076	3,342	0%	66%
Total	648,034	769,832	901,265	100%	18%
YOY Growth		19%	17%		

IPGP 2013-15	2013	2014	2015	% 2015	3-yr Gr
Materials Processing	608,702	731,274	849,335	94%	18%
Other applications	39,332	38,558	51,931	6%	15%
Total	648,034	769,832	901,266	100%	18%

User Entry

2. IPGP's business is worldwide with most, 35% of 2015 revenue, coming from China and 31% coming from Europe.

3-4. IPGP's estimated growth rate for the next 5 years, using the provided assumptions are 14% regional growth and 18% product segment growth.

Table 17 - IPGP Revenue Analysis using Excel Template (Data from IPGP 2015 Annual Report)

IPGP 2013-15	% Annual Growth (User Estimates)						User's Estimated Annual Revenue						5-yr Gr
	2015	2016	2017	2018	2019	2020	2015	2016	2017	2018	2019	2020	
North America	6%	5%	5%	5%	5%	5%	131,525	138,101	145,006	152,257	159,869	167,863	5%
Europe							-	-	-	-	-	-	
Germany	20%	10%	10%	10%	10%	10%	93,802	103,182	113,500	124,850	137,336	151,069	10%
Other	16%	12%	12%	12%	12%	12%	189,123	211,818	237,236	265,704	297,589	333,299	12%
Asia & Australia							-	-	-	-	-	-	
Japan	6%	5%	5%	5%	5%	5%	76,033	79,835	83,826	88,018	92,419	97,040	5%
China	27%	15%	15%	15%	15%	15%	311,946	358,738	412,549	474,431	545,596	627,435	15%
Other	22%	25%	25%	25%	25%	25%	95,494	119,368	149,209	186,512	233,140	291,425	25%
Rest of World	66%	50%	50%	50%	50%	50%	3,342	5,013	7,520	11,279	16,919	25,378	50%
Total							901,265	1,016,054	1,148,846	1,303,051	1,482,866	1,693,509	14%
YOY Growth								13%	13%	13%	14%	14%	

IPGP 2013-15	2015	2016	2017	2018	2019	2020	5-yr Gr
Materials Processing	18%	15%	15%	18%	20%	20%	18%
Other applications	15%	12%	15%	15%	15%	15%	15%
Total		User Entry	Est 5-yr Gr				

2015	2016	2017	2018	2019	2020	5-yr Gr
849,335	976,735	1,123,246	1,325,430	1,590,516	1,908,619	18%
51,931	58,163	66,887	76,920	88,458	101,727	15%
901,266	1,034,898	1,190,133	1,402,350	1,678,974	2,010,346	18%

Challenge

1. Complete a business model on the newest and oldest holding in your [club] portfolio and present your findings.

Chapter 5 FORECASTING GROWTH using Business Modelling

Goal

Use the knowledge, skills and resources needed to actively manage a portfolio of quality-growth companies to achieve a 5-year annualized return of 15% or better.

Objectives

Use product lines (segments) to forecast sales growth.

Use the income statement business model (preferred procedure) to forecast earnings growth.

Combine trend analysis with forecast business model to select earnings growth.

Concepts

Income Statement Business Model (Preferred Procedure)

Tools/Resources

Income Statement Business Model (Preferred Procedure, [Excel Template](#))

Morningstar.com [Competitors](#)

Instruction Background

Selecting a forecast growth rate for sales and earnings is our objective, same as the previous lesson.

However, we will dig deeper into sales (top line) growth to better understand how that growth will be created and we will attempt to better understand the business model used to convert sales into earnings by modelling the normal business income statement.

Business Model (Preferred Procedure)

Recall, our goal is to forecast earnings growth. However, we now have more information than just (1) history and (2) analysts' forecast; we also understand the company's (3) life cycle phase, we know exactly where (4) revenue is coming from and how the (5) company plans to grow in the future. Increased understanding provides increased confidence.

When historical sales and historical earnings growth differ you want to estimate their business model to understand how the company converts revenue into earnings per share.

When forecasting earnings per share (EPS) we have three sets of data we can use: history, analysts' estimates, and calculated EPS using the preferred method. We calculate EPS by using an income statement to model the company under evaluation. The basic model (preferred method) is:

$$\begin{aligned} &+ \text{Income} \\ &- \text{Expense} = (1 - \% \text{ Profit Margin}) \times \text{Income} \\ &= \text{Pre-Tax Profit} \\ &- \text{Taxes} = \% \text{ Tax Rate} \times \text{Net Profit} \\ &= \text{Earnings (Net Profit)} \\ &\div \text{Outstanding Shares} \\ &= \text{Earnings per Share (EPS)} \end{aligned}$$

Forecast both high and low risk for each variable then calculate your own high risk and low risk EPS and add your results to the mix of EPS history and analysts' estimates.

Forecasting Growth Business Modelling (cont.)

Our business model requires us to forecast rates for profit margin, tax rates, and outstanding shares. Historical result allows trend analysis. Value Line provides 3-5 year forecasts. The impact of tax rates and outstanding shares is about one-third the impact of profit margin. Typically, trend analysis and analysts' forecasts are sufficient research for forecasting tax rates and outstanding shares. It also helps to know if the company is buying back shares which can be found in their annual report and usually mentioned in analysts' comments.

Value Line provides convenient one-stop shopping for our sample company, CTSH.

2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	© VALUE LINE PUB. LLC	19-21
2.50	3.71	4.83	5.52	7.55	10.10	12.18	14.55	16.84	20.39	22.65	25.55	Sales per sh	35.15
.47	.70	.87	1.05	1.38	1.65	1.99	2.31	2.87	3.42	3.75	4.25	"Cash Flow" per sh	5.85
.39	.58	.72	.89	1.19	1.43	1.72	2.02	2.61	3.06	3.35	3.80	Earnings per sh ^A	5.25
--	--	--	--	--	--	--	--	--	--	<i>Nil</i>	<i>Nil</i>	Div'ds Decl'd per sh	<i>Nil</i>
.18	.32	.29	.13	.31	.48	.55	.43	.35	.45	.45	.45	Cap'l Spending per sh	.50
1.88	2.55	3.37	4.46	5.90	6.52	8.05	10.10	12.70	15.24	18.20	21.60	Book Value per sh	33.50
570.05	576.02	583.34	594.46	607.88	606.21	603.36	607.73	609.40	609.00	610.00	610.00	Common Shs Outst'g ^B	612.00
42.6	34.1	18.8	17.0	23.8	25.2	19.5	19.2	18.8	20.3	<i>Bold figures are Value Line estimates</i>		Avg Ann'l P/E Ratio	17.5
2.30	1.81	1.13	1.13	1.51	1.58	1.24	1.08	.99	1.03			Relative P/E Ratio	1.10
--	--	--	--	--	--	--	--	--	--			Avg Ann'l Div'd Yield	<i>Nil</i>
1424.3	2135.6	2816.3	3278.7	4592.4	6121.2	7346.5	8843.2	10262.7	12416.0	13800	15600	Sales (\$mill)	21500
20.6%	20.4%	21.0%	21.6%	21.0%	20.5%	20.6%	20.9%	21.6%	21.4%	21.0%	21.5%	Operating Margin	21.5%
34.2	53.9	74.8	89.4	103.9	117.4	149.1	172.2	151.3	209.4	225	250	Depreciation (\$mill)	325
232.8	350.1	430.8	535.0	733.5	883.6	1051.3	1228.6	1598.7	1874.1	2045	2335	Net Profit (\$mill)	3250
16.2%	15.5%	16.4%	16.0%	16.5%	24.4%	24.2%	27.2%	24.9%	25.5%	25.5%	25.5%	Income Tax Rate	25.5%
16.3%	16.4%	15.3%	16.3%	16.0%	14.4%	14.3%	13.9%	15.6%	15.1%	14.8%	15.0%	Net Profit Margin	15.1%

Figure 17 - CTSH May 2016 Value Line (Example)

Common shares, in million, show a steady historical increase of 570 to 609 shares over 10 years, or about 4 million more shares each year. However, recently (2014-2016) show a significant slowing of growth and Value Line is projecting an addition 2 million shares over the next 3-5 years. We can forecast 2 million up to 4 million additional shares, or 612M to 614M, based on this information. Keep in mind the fewer number of shares the greater the rate of increase of earnings per share (EPS).

Tax rates show a 10-year change from 16% to 25%; a 5-year change from 24.4% to 25.5%. Value Line is forecasting a stabilization of tax rates at 25.5%. We know tax rates tend to stabilize over time and giving increased weight to the last five years combined with Value Line's forecast we are probably safe to forecast tax rates between 24% to 26% (rounding). Like shares, when calculating high and low risk we will use the higher rate, 26%, for the lower risk and 24% for the higher risk.

Profit margin is equally important to revenue when calculating EPS. A 1% change of revenue will translate into a 1% change of earnings. A 1% change of profit margin will translate into a 1% change of earnings.

2 QUALITY ANALYSIS		Company COGNIZANT TECH SOLUTIONS (CTSH)										08/12/16	
		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	5 YEAR AVG.	TREND UP/DOWN
A	% Pre-tax Profit on Sales	19.5	19.4	18.3	19.4	19.1	19.1	18.9	19.1	18.7	17.4	18.6	DOWN

Figure 18 - CTSH SSG Section 2 Line A (Source: Toolkit)

Forecasting Growth Business Modelling (cont.)

BetterInvesting uses pre-tax profit (PTP) for its model because it only excludes taxes. Value Line provides Operating Margin as its nearest example. Operating Margin excludes expenses that are not directly associated with a product (overhead expenses) so we can use their forecast to provide trend but not a direct forecast of pre-tax profit.

Toolkit and the Online SSG provide a 10-year chart of PTP which aids in trend analysis. We see, in figure 19, a consistent margin for the last 10 years above 17.5% on the chart with an average of 18.6% for the last 5 years. The numbers show very consistent results between 18% and 19%. The most recent year, however, has dipped to about 17.4%. Value Line's Operating Margin history shows 10 years all just above 20% with a forecast also just above 20% at 21.5%. Net Profit Margin (after taxes) shows a 10-year change from 16.2% to 25.5% and forecast of 25.5%. We can forecast between 17% and 19%.

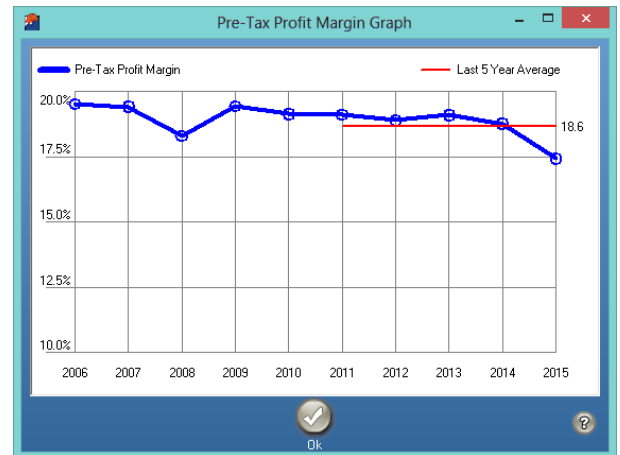


Figure 19- CTSH Pre-Tax Profit Margin Chart (Source: Toolkit)

Margins vary by industry and our methodology prefers we purchase companies leading their industries with margins higher than their competitors. Morningstar provides comparisons using operating margins. The list has been reduced to companies with comparable market cap and growth for comparison.

Name	Market Cap	Net Income	P/S	P/B	P/E	Yield%	CAGR%	Margin%	Int Coverage	D/E
Infosys Ltd (USD,INR)	36,890.0	140,334.0	3.8	4.0	17.5	2.3	18.5	25.4	—	—
Wipro Ltd (USD,INR)	27,442.0	87,523.0	3.5	3.7	21.2	0.8	13.6	19.6	82.4	-
Cognizant Technology Solutions Corp	35,324.0	1,514.0	2.7	3.6	23.5	—	22.0	18.5	123.2	0.1
Industry Average	6,311.0	42,424.0	1.8	5.6	17.4	1.9	10.0	(238.8)	330.4	0.8

Figure 20 - Morningstar.com Competitors (Exported from Morningstar.com into Excel and filtered for Market Cap and CAGR%)

CTSH is doing much better than the industry which appears to be losing money, an average margin of -239%, but we have two competitors we'd want to carefully study before making a final buy decision.

Our analysis provides the following high and low forecasts for our model:

Table 18 - CTSH High and Low forecast for Sales, Margin, Tax Rate, and Shares (Source: Value Line, Morningstar, and Toolkit)

	Low Forecast	High Forecast
Revenue (Sales)	13%	15%
% Pre-Tax Margin	17%	19%
% Tax Rate	26%	24%
Shares Outstanding (M)	614M	612M

Forecasting Growth Business Modelling (cont.)

Table 19 - CTSH Business Model using low and high estimates

CTSH 2015	Current	Low Est.		High Est.	
		Est Rate	5-yr Value	Est Rate	5-yr Value
Sales (millions)	\$12,416.0	13%	\$22,875.7	15%	\$24,973.0
%Profit Margin (Expenses)			18,986.8		20,228.1
Pre-tax Profit		17%	3,888.9	19%	4,744.9
%Taxes Rate (Taxes)		26%	1,011.1	24%	1,138.8
Earnings			2,877.8		3,606.1
Outstanding Shares (M)			614.0		612.0
EPS	2.65	12%	4.69	17%	5.89
	Actual	User	Calc	Answer	

Adding our calculated EPS results (red) derived from our revenue analysis we can add one more range to our estimated forecasts. Which result is the most accurate? Only time will tell. You can justify selecting any value from 11% to 17%. The ultimate selection is determined by your confidence and risk profile.

Table 20 - CTSH Growth Consolidated Analysis with Calculated EPS (Example)

CTSH 2015	Historical Trend Analysis	Life Cycle	Analysts' Forecasts	Calculated EPS	Consolidated Range
EPS Forecast	13%-17%	Expect slowing	13%-14%	12%-17%	12%-17%

As before it is helpful to break our consolidated result into 3 equal ranges and labeling them as low, medium and high risk. In part 1, Forecasting Growth, we reviewed history and analysts' forecasts. When historical sales and earnings rates are the same you can safely use this forecast. However, when historical rates differ, or you want increased confidence, including life cycle, strategic growth plans, and revenue analysis to increase your understanding and confidence.

Table 21 - CTSH Consolidated EPS Growth grouped by risk

CTSH Growth	Low Risk	Medium Risk	High Risk
EPS Forecast	12%-13%	14%-15%	16%-17%

The final selection is based on your risk profile. There is no right or wrong (until history reveals it) only supported (between 12% and 17%) and unsupported (outside 12% and 17%) choices.

Commentary. You may have noticed the final supported range of 12%-17% is almost the same result from the first lesson using trend analysis and analysts' forecast, 13%-17%. As we build experience and confidence, we discover that increased analysis usually improves confidence but does not always change the supportable result.

Guided Practice

1. Why would you use an income statement-based business model (preferred procedure) to estimate future earnings?

Sales is normally less volatile and more predictable than earnings. Since we generally expect taxes and number of outstanding shares to remain fairly constant, a business model focuses our

Forecasting Growth Business Modelling (cont.)

attention on profit margin. Profit margin is adjusted by management as needed to achieve the company's strategic plan. When completed and combined with previous research results, our confidence in growth (quality) will be sufficient to complete the investment or pass as too risky.

2. When your trend, revenue, and business model analysis finally provide low, medium, and high risk choices how do you know which is right for you?
When finished you will have a sense of confidence that the company will grow at your estimated growth rate. Your confidence and personal risk profile will determine which option you select. Each option is supportable based on your analysis. (Keep in mind, the final decision to buy or sell is done within context of the portfolio, not in isolation.)

Independent Practice

1. Use your regional and segment estimated revenue growth rates as your high and low estimates for a business model of IPGP. Use Value Line estimates and trend analysis to estimate high and low values for profit margin (28%VL), tax rates (31%VL) and outstanding shares (54.5M shares VL).
2. What are your judgment options from your consolidated trend, revenue, and business model analysis?

Independent Answers

1. The business model analysis to estimate 5-year EPS growth using the revenue analysis and Value Line estimates for profit margin, tax rates and shares; results is 6% - 10% EPS growth.

Table 22 - IPGP Business Model using high and low estimates from IPGP Jul 2016 Value Line

IPGP 2015	Current	Low Est.		High Est.	
		Est Rate	5-yr Value	Est Rate	5-yr Value
Sales (millions)	\$901.3	14.0%	\$1,735.4	18.0%	\$2,062.0
%Profit Margin (Expenses)			1,249.5		1,484.6
Pre-tax Profit		28.0%	485.9	28.0%	577.3
%Taxes Rate (Taxes)		31.0%	150.6	31.0%	179.0
Earnings			335.3		398.4
Outstanding Shares (M)			54.5		54.5
EPS	4.53	6.3%	6.15	10.0%	7.31
	Actual	User	Calc	Answer	

Forecasting Growth Business Modelling (cont.)

2. The consolidated results and risk options for IPGP are:

Table 24 - IPGP Consolidate EPS Growth Analysis

IPGP 2015	Historical Trend Analysis	Life Cycle	Analysts' Forecasts	Calculated EPS	Consolidated Range
EPS Forecast	6%-17%	Explosive but transitioning to mature	11%-12%	6%-10%	6%-17%

Table 23 - IPGP EPS Growth Forecast grouped by risk

IPGP Growth	Low Risk	Medium Risk	High Risk
EPS Forecast	6%-10%	11%-15%	16%-19%

Challenge

1. Complete a business model on the newest and oldest holding in your [club] portfolio and present your findings.

Chapter 6 EVALUATING MANAGEMENT

Goal

Use the knowledge, skills and resources needed to determine if a company has quality management.

Objectives

Use pre-tax profit history and peer comparison to evaluate consistency of management.

Use debt/equity and debt/capital history and peer comparison to evaluate consistency of management.

Use return on equity (ROE) history and peer comparison to evaluate consistency of management.

Concepts

Pre-tax Profit & Pre-tax Profit Margin

Debt/Equity & Debt/Capital

Return on Equity (ROE)

Recourses/Tools

Online SSG – Compare Peers

SSG Section 1 & 2

Instructional Background

Sales and earnings growth analysis gives us a good idea how good management is doing but there are three measures that are the direct responsibility of management and provide the best evaluation of their performance: pre-tax profit, debt, and return on equity.

We expect competitive results that show stability or improvement over time for quality growth companies.

Pre-tax Profit

Profit is a big deal and management is solely responsible for a company's profitability. Profit is equally important to a company's revenue. Increasing and decreasing profit margins has a magnified impact on earnings growth.

Pre-tax profit (PTP) is the dollar amount retained by a company from revenue after expenses but before taxes. Taxes are more controlled by the government than management so when evaluating management taxes are excluded. Pre-tax profit margin is the percent of each dollar of revenue remaining after expenses and before taxes.

Ideally, pre-tax profit (magenta line) will have exactly the growth rate as sales (green line) and earnings (blue line), resulting in the SSG Section 1 graph showing three perfectly straight and parallel lines.

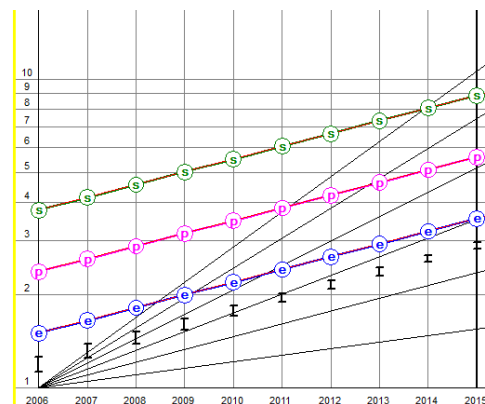


Figure 21 - Ideal Pre-tax Profit growth (Toolkit)

Evaluating Management (cont.)

2 EVALUATING Management

Cognizant Tech Solns

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Last 5 Year Avg.
Pre-tax Profit on Sales	19.5%	19.4%	18.3%	19.4%	19.1%	19.1%	18.9%	19.1%	18.7%	17.4%	18.6%
% Earned on Equity	22.9%	22.6%	21.3%	19.9%	20.1%	21.9%	21.4%	21.7%	19.4%	18.3%	20.5%
% Debt To Capital	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	17.5%	12.2%	5.9%

Figure 22 – CTSH SSG Section 2 Printout (Online SSG)

Evaluate Management												Trend
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	5 Yr Avg	
% Pre-Tax Profit on Sales	19.5%	19.4%	18.3%	19.4%	19.1%	19.1%	18.9%	19.1%	18.7%	17.4%	18.6%	
% Earned on Equity	22.9%	22.6%	21.3%	19.9%	20.1%	21.9%	21.4%	21.7%	19.4%	18.3%	20.5%	
% Debt To Capital	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	17.5%	12.2%	5.9%	

Figure 23 – CTSH SSG Section 2 Screen Display (Online SSG)

10 years of percent pre-tax profit margin is shown in section 2, first line. The last column of section 2 provides the last 5-year average, which allows you to compare the most recent year with the last 5 years' average. The screen display shows a small graph that will be colored red or green, indicating if the most recent year is up or down compared to the 5-year average.

If most recent year is less than the average, the reason must be addressed to determine if the profit margin reduction puts achievement of the company's strategic plan in jeopardy and verify that the estimated EPS growth reflects the change.

With stable or increasing profit margins compare the company to its peers and industry using the Online SSG "Compare Peers" option. (Not available in Toolkit.)

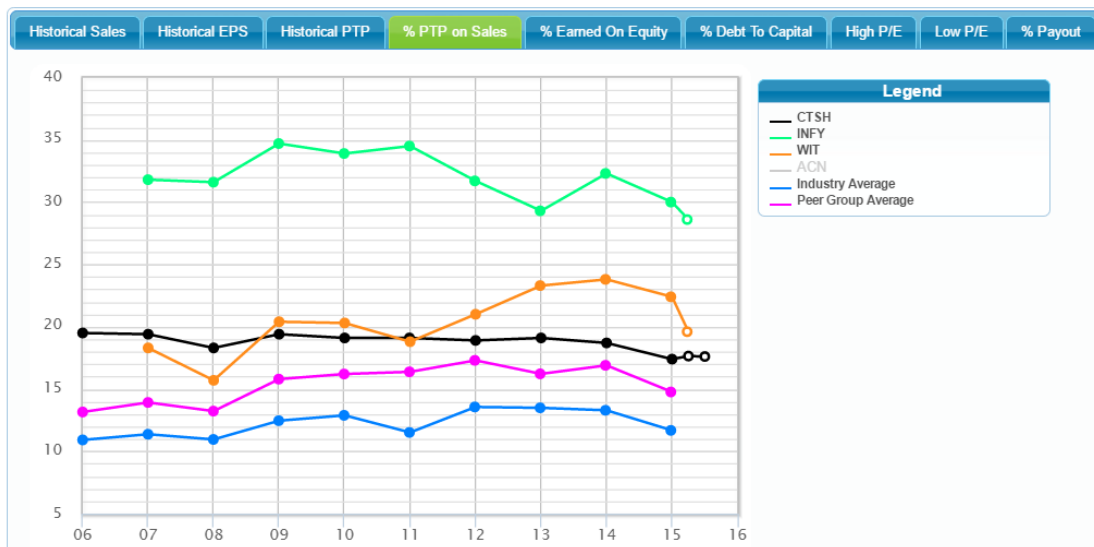


Figure 24 - CTSH %PTP compared to peers & industry (Online SSG)

Comparison with peers and industry quickly shows that our example company, CTSH (black line) does not have the best profit margin compared to INFY and WIT but does beat both the industry and peer average. CTSH also shows the most stable margins. Based on this comparison better margins are available but with less stability and the entire industry is experiencing reducing margins.

Evaluating Management (cont.)

In our example, CTSH, after reflecting declining margins in EPS analysis, expect the company's reward potential to drop significantly reducing the likelihood the company will pass basic buy criteria during portfolio management review.

Debt

Management of debt is key to financial success. Debt and equity resources are used to help finance business growth, such as: acquisitions, new products, factories, expansion into new geographies. Occasionally, we see companies using long-term debt that are not aimed at growth, such as: paying for dividends, company buy-backs, or even paying the costs of regular business operations.

To evaluate debt BetterInvesting focuses on four comparisons. First, historical debt trends – is debt increasing, decreasing, or stable. Two ratios, debt as a percent of capital (D/C) and debt as a percent of equity (D/E) are used to determine if debt levels threaten risk of loss during economic downturns. Finally, debt levels are compared to other companies in the industry.

Different industries require different amounts of debt and some industries are less susceptible to economic downturns. Utilities can accept high levels of debt with little risk because of their near-monopoly business model. Capital-intensive businesses such as car and aircraft manufacturing require high levels of debt to get products to the market. As you review debt consider reviewing industry norms for comparison.

Debt level trends are available on the SSG section 1 graph by selecting Long-term Debt (red line). Our sample company CTSH, has zero debt until the last two years and seems to be quickly reducing its debt. The only real questions are if they borrowed too much and for what reason was the money borrowed?

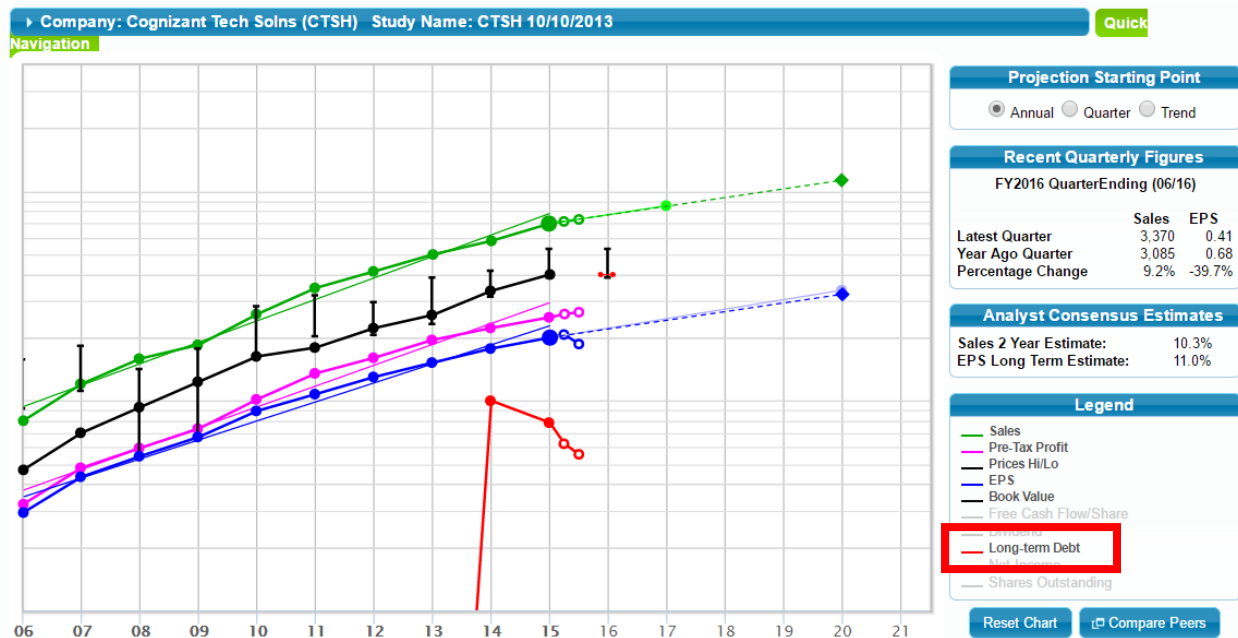


Figure 25 - CTSH Section 1 w/Long-term debt (Online SSG)

Too much debt? BetterInvesting monitors debt with two ratios: Debt to Capital (D/C) and Debt to Equity (D/E). Each consider debt as a percent of financial resources. Capital is the larger, more inclusive resource and general guidance is that D/C should not exceed 33%. Equity is the smaller resource and

Evaluating Management (cont.)

general guidance is that D/E should not exceed 50%. Both measures are available on Toolkit SSG. Only D/C is available on the Online SSG.

Debt-to-equity (D/E) is the easiest to understand. First however, there is the choice of using total debt (long-term + short term) or long-term only. Short-term debt, or current debt, is payable in 12 months or less and long-term debt, payable after 1 year and often over multiple years. The online SSG normally uses total debt; Toolkit 6 uses long-term debt only. Once the results is recorded in Toolkit 6, SSGs imported into the online SSG from Toolkit 6 will continue to use its original results based on long-term debt only. Equity (also known as net worth and book value) is the difference between assets and liabilities.

$$\text{Equity} = \text{Assets} - \text{Liabilities}$$

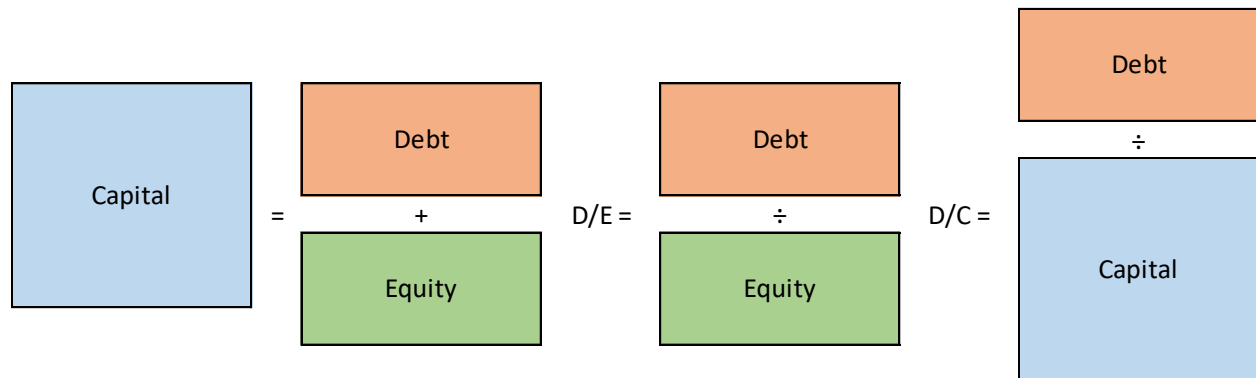


Figure 26 Capital = Debt + Equity

D/E = Debt/Equity

D/C = Debt/Capital

%Debt to Capital (D/C) ≤ 33%
%Debt to Equity (D/E) ≤ 50%

Debt (Liabilities) divided by Equity lets you know the percentage of your assets that are financed by debt. If you have no debt, you own 100% of all your assets. If you have a D/E of 30%, then 30% of your assets are financed by debt.

A 10-year history of D/E is provided by Toolkit allowing you to evaluate the percent of long-term debt and the trend.

2 QUALITY ANALYSIS		Company COGNIZANT TECH SOLUTIONS (CTSH)										09/23/16	
		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	5 YEAR AVG.	TREND UP / DOWN
A	% Pre-tax Profit on Sales	19.5	19.4	18.3	19.4	19.1	19.1	18.9	19.1	18.7	17.4	18.6	DOWN
B	% ROE (Beginning Yr)	↘	33.9	28.2	26.4	26.6	24.2	26.5	25.0	25.3	21.9	24.6	DOWN
C	% LT Debt to Equity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.6	9.9	11.3	DOWN

Figure 27 - CTSH SSG Section 2 (Toolkit)

CTSH increased its debt in 2014 and 2015 from a history of no debt but remains below the general guidance of less than 50% D/E. The SSG evaluates trend by comparing the most recent year, 2015,

Evaluating Management (cont.)

results of 9.9% D/E with the 5-year average (zeroes excluded). Since the most recent year is less than the 5-year average the “Down” trend is declared which in the case of debt is preferred.

Debt-to-capital (D/C) measures debt as a percent of all investment resources, including financed debt. Like D/E, there is a choice to use long-term debt or total debt (short-term debt + long-term debt). Capital is the combined value of debt and equity which represents all a company’s investment assets without borrowing more.



BetterInvesting’s guidance is that investment capital should have 33% or less financed as debt. If D/C is 30% then 30% of all investments resource is from debt. Therefore, management would still have 70% of its investment resources funded by equity.

The Capitalization box at the top of the SSG provides the current D/E (% to Tot Cap). In our example, CTSH’s D/C is 8.4%.

Company	Cognizant Tech Solns		Date	09/20/16	
Prepared by	TORBENSON		Data taken from	BI Stock Data	
Where traded	NAS		Industry	Information Technology Services	
Capitalization	--- Outstanding Amounts		Reference		
Preferred (\$M)	0.0	% Insiders		% Institution	
Common (M Shares)	608.8	0.5		92.6	
Debt (\$M)	908.8	% to Tot Cap	8.4	% Pot Dil	0.4

Figure 28 - CTSH Capitalization (SSG Online or Toolkit)

Section 2 of the Online SSG we see the 10-year history of D/C on the last line. The most current year, 2015, shows 12.2% and a trend of increased debt compared to the 5-year average %D/C of 5.9% (zeroes included).

2 EVALUATING Management

	Cognizant Tech Solns										
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Last 5 Year Avg
Pre-tax Profit on Sales	19.5%	19.4%	18.3%	19.4%	19.1%	19.1%	18.9%	19.1%	18.7%	17.4%	18.6%
% Earned on Equity	22.9%	22.6%	21.3%	19.9%	20.1%	21.9%	21.4%	21.7%	19.4%	18.3%	20.5%
% Debt To Capital	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	17.5%	12.2%	5.9%

Figure 29- CTSH SSG Section 2 (Online SSG)

The difference between the 8.4% D/C reported on the front of the SSG and 12.2% in section 2 is due to two reported quarters since the end of 2015. The front Capitalization report is reporting the most recent quarter compared to the end of the year on section 2.

Both 12.2% and 8.4% are well below the desired 33% or less for D/C. We will still compare our company under study with its peers and industry. The Online SSG provides a 10-year comparison with the ability to change the comparison companies.

Evaluating Management (cont.)

D/C industry comparison? The 10-year peer comparison chart quickly illustrates which companies are below 33% D/C: WIT, INFY, and CTSH. This chart includes the two recently reported quarters for CTSH, the last quarter report reflecting the Capitalization section on the front of the SSG.

We also see that both the average peer group and industry exceed 33% which suggests that quality companies in this industry may exceed 33% D/C and still provide excellent results. We may want to consider INFY seeing it has no debt.

Both the D/C and D/E ratios for CTSH show the company well below industry averages suggesting management's debt management is providing less risk for investors.

We've also discovered INFY with no debt which may turn out to be a better choice than CTSH in this industry.

Confirming D/E and D/C ratios is easy with available tools but the person responsible for tracking a company for a club will refer back to the company's strategic plan (page 21) and financials to verify the intended use of the LT debt.

For CTSH we see their strategic plan is to use it for acquisitions, new services, and geographic expansion. Monitoring quarterly reports will verify use of debt and progress of their strategic growth plan.

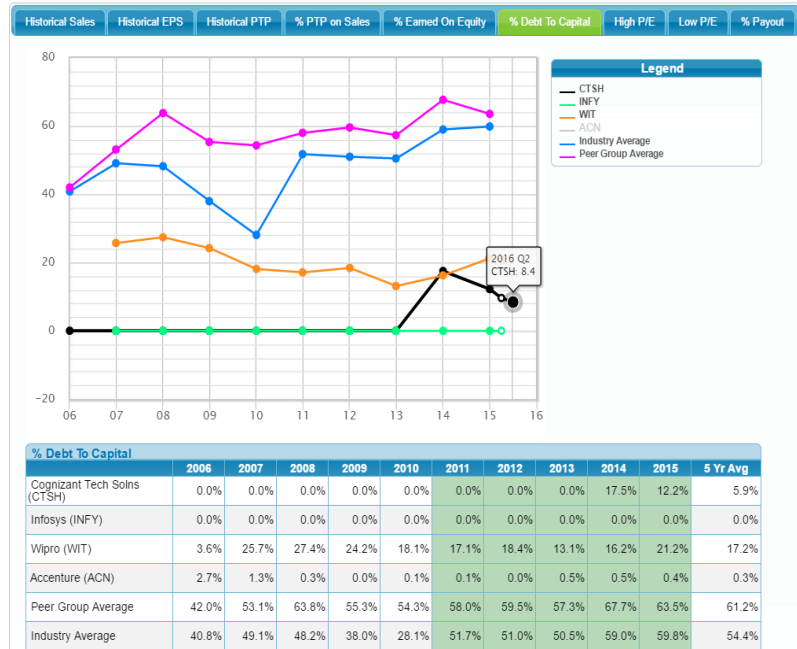


Figure 30 - CTSH D/C Peer Comparison Chart (Online SSG)

Online SSG or Toolkit? D/E is provided by Toolkit. D/C is provided by Online SSG. Both are useful but since both analyses typically result in the same conclusions, I see no need to change analysis tools but given the choice, give the edge to the Online SSG with the inclusion of the "Peer Comparison" option.

Capital Lease Accounting Change

Accounting rules have changes effective with fiscal years starting after 12/15/2018; capital lease debt must be included on the balance sheet. Capital lease debt is typically both short-term and long-term. The addition of this debt in total debt and long-term debt effects both D/C and D/E ratios. CTSH was first impacted by this in FY19. The result is easily seen in D/E, D/C, and LT Debt plot on SSG section 1.

CTSH FY19:

- %D/C is 13.3% (incl capital lease) vs. 6.3% (excluding capital lease)
- %D/E is 15.3% (incl capital lease) vs. 6.7% (excluding capital lease)
- Total Debt is \$1,685M (incl capital lease) vs. \$738M (excluding capital lease)
- Long-Term Debt is \$1,445M (incl capital lease) vs. \$700M (excluding capital lease)

Evaluating Management (cont.)

We don't see a big issue for CTSH but for a retail company like ULTA Beauty with a number of leased storefronts their %D/C jumps from 0% in 2018 to 50.5% in 2019!!! Their debt jumps from \$0 to long-term debt of \$1,698M and total-debt to \$1,938M. Technically, nothing has changed with their leases or the cost of their leases. The only change is increased transparency on the balance sheet and the consequent change to ratios using debt.

BetterInvesting is currently (as of Dec 2019) evaluating the adjustment required either to the guidance regarding D/C and D/E; and/or the possibility of including debt ratios with capital expense.

Return on Equity (ROE)

Return on equity (ROE) measures how well a company is using its investment capital to grow the company. Well-managed companies are expected to return at least 15% and many expect 20% return. And, like debt, different industry business models vary in the need for ROE, so, verify that our company's ROE is equal or better than the industry's ROE. Return on equity is the ratio between earnings (net income) and the equity invested.

$$ROE = \frac{\text{Earnings (Net Income)}}{\text{Equity}}$$

ROE may be more easily understood if we show how the net income is derived: current value less original cost (investment).

$$ROE = \frac{\text{Current Value} - \text{Investment}}{\text{Investment}}$$

ROE is heavily influenced by how debt is leveraged. We understand debt is good but too much debt can be a problem in bad times. For example, you buy a home for \$100K. You can pay the entire \$100K or pay only a portion and finance the balance.

Later, you sell the house for \$110K, having paid 100% for the house, your return on equity is $(\$110K - \$100K)/\$100K = 10\%$. If you had financed the house for \$60K, only investing \$40K cash, the ROE is now $(\$110 - \$40K)/\$40 = 150\%$. Wow, big difference. Why not finance everything?

Bad times is the reason. What happens if you suddenly lose your job and cannot make the monthly payments? The balancing act required by management is to leverage enough debt to accelerate growth initiatives while avoiding bankruptcy during a bad business cycle.

CTSH ROE history is provided in SSG section 2, second line on both the Online SSG and Toolkit.

2 EVALUATING Management										Cognizant Tech Solns	
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Last 5 Year Avg
Pre-tax Profit on Sales	19.5%	19.4%	18.3%	19.4%	19.1%	19.1%	18.9%	19.1%	18.7%	17.4%	18.6%
% Earned on Equity	22.9%	22.6%	21.3%	19.9%	20.1%	21.9%	21.4%	21.7%	19.4%	18.3%	20.5%
% Debt To Capital	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	17.5%	12.2%	5.9%

Figure 31 - CTSH SSG Section 2 - % Earned on Equity or ROE (Online SSG)

Evaluating Management (cont.)

CTSH “% Earned on Equity” (ROE) in 2015 is 18.3%; above our goal of 15%. However, it is below the 5-year average of 20.5% suggesting increased review to understand the downward trend.

Like debt, ROE varies with industries. Use the Online SSG to verify ROE is (1) stable or increasing; (2) at or above 15%; (3) equal or better than the industry average.

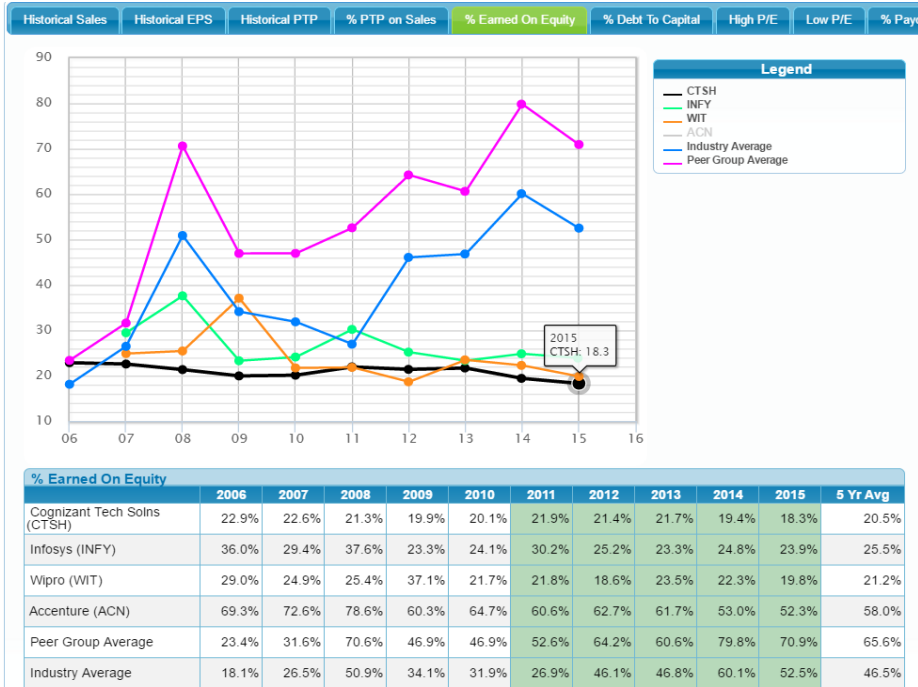


Figure 32 - CTSH Peer & Industry ROE Comparison (Online SSG)

IT Services industry has an average ROE of 46.5% compared to CTSH’s ROE of 20.5%.

Debt analysis

Table 25 - CTSH Consolidated Debt Analysis (Sources: ToolKit & Online SSG)

CTSH Debt Analysis	BI Guidance	CTSH (Trend)	Industry	Comments
Debt to Equity (D/E)	≤ 50%	9.9% (Down)	167%	Good
Debt to Capital (D/C)	≤ 33%	8.4% (Down)	54%	Good
ROE	≥ 15%	18.3% (Down)	46.5%	Below industry and slowing. Why?

CTSH is lagging the industry in ROE but has little debt which may explain the difference. A closer look at their strategic growth progress across the last two years may be needed to explain the slowing ROE.

ROE vs. EPS Growth. ROE (less dividend yield) is considered a sustainable growth rate. Earlier (page 35, Table 21) we estimated CTSH future growth at 12-13% for a poor business cycle; 14-15% for a normal business cycle; and 16-17% for a good business cycle. Only the slowing ROE is a concern.

Evaluation of debt and ROE either provide confidence a company is sufficiently funding growth initiatives without too much debt (D/E, D/C) and sufficient results (ROE).

Evaluating Management (cont.)

CTSH has funded its growth initiatives primarily with equity with acceptable results but lagging industry ROE. INFY was discovered with zero debt and steady 24% ROE which suggests a challenge to CTSH.

Guided Practice

1. Which measures do we review to determine how well a company is being managed?
Pre-tax profit (PTP), Pre-tax profit margin (%PTP), Debt-to-Capital (D/C), Debt-to-Equity (D/E), and Return on Equity (ROE)
2. What are the expected results for PTP and ROE?
Stable or improving with average or better results than the industry.
3. What is %PTP margin measuring?
Profit margins are measuring the percent of each dollar of sales retained by the company after expenses but before taxes.
4. Why is %PTP margin so important?
Increasing and decreasing profit margins has a magnified impact on earnings growth which will eventually translate into increased or decreased price appreciation. Also, when a company is experiencing difficulties, slipping profit margins are often the first indicator of problems as management cuts profits to hold onto existing customers and potentially capture competitor's customers.
5. Is long-term debt good or bad?
Long-term debt is good when used to grow the company but too much debt can put the company at risk during difficult financial times.
6. What is the difference between D/C and D/E?
D/E identifies the percent assets are financed by debt. D/C identifies the percentage of capital investments financed by debt.
7. What does BetterInvesting consider acceptable D/E and D/C? What might mitigate these limits?
D/E should be 50% or less. D/C should be 33% or less. Some industry business models may allow more debt.
8. Where do you find a company's 10-year history of D/E and D/C?
D/E history is available on Toolkit's SSG section 2. D/C history is available on the Online SSG section 2.
9. Where do you find industry averages for D/E and D/C?
D/C industry average is available on the Online SSG under "Peer Comparison". Free resources for D/E have become pay services. Stick with D/C on the Online SSG.
10. What is Return-on-Equity (ROE)?
ROE measures how well a company is using its profit to grow the company.
11. What is expected for ROE from a high-quality growth company?
15% or more.

Evaluating Management (cont.)

12. How does debt influence ROE?

Return is the profit compared to the investment. If any portion of the investment is financed the amount invested from equity is reduced, increasing the return on the amount invested.

13. Shouldn't a company finance all their investments to maximize ROE?

Debt needs to stay within acceptable limits to avoid losses during financial problems.

14. How do I know when a company has too much debt?

D/C and D/E are both increasing every year and consistently exceed both BI guidance and industry averages.

Independent Practice

1. Complete a debt analysis for IPGP.

IPGP Debt Analysis	BI Guidance	IPGP (Trend)	Industry	Comments
Debt to Equity (D/E)	≤ 50%			
Debt to Capital (D/C)	≤ 33%			
ROE	≥ 15%			

Challenge

1. Complete a debt analysis for a company in your portfolio.

??? Debt Analysis	BI Guidance	??? (Trend)	Industry	Comments
Debt to Equity (D/E)	≤ 50%			
Debt to Capital (D/C)	≤ 33%			
ROE	≥ 15%			

Chapter 7 VALUATION High & Low P/E

Goal

Use the knowledge, skills and resources to estimate a company's business cycle highs and lows.

Objectives

Understand Price/Earnings Ratio

Understand the 3 components of Returns

Use historical P/E movement to predict a company's business cycle

Concepts

P/E Ratio

Business Cycle

Return Components

Tools/Resources

SSG Section 3

SSG Section 4

www.BigCharts.com

Instructional Background

Valuation analysis is used to determine when a company's share value is a buy, hold or sell. SSG Sections 3, 4 and 5 analyze valuation by estimating risk and reward. Four SSG judgments are required: (1) High P/E, (2) Low P/E, (3) Low Price, and (4) Percent Payout. Estimating the high P/E and low P/E are most important.

This strategy requires understanding P/E ratio, business cycle, and the three components of return.

Price/Earnings Ratio

P/E is used to tell us when a company is fairly priced. P/E provides unit pricing for companies. When buying gasoline at the gas station, if someone said they just paid \$20 for gas, your first question is how many gallons. If they bought 10 gallons, or, \$2 per gallon we may be impressed. But if they bought 5 gallons, or, \$4 per gallon, we may not be as impressed. Our judgment is based on our understanding of the average unit price of gas.

Unit pricing requires a fair price comparison point to be useful. If you pay \$2/pound for something you don't know if the price is good unless you know its price history. The same problem exists for companies. We use P/E history to understand what normal is for a particular company.

Below is Section 3 for Cognizant Technology Solutions Corporation (CTSH). The bottom right corner shows **CURRENT PRICE EARNINGS RATIO: 21.4**. Is that high, low, or fair? To estimate a fair value (P/E) we simply average the last 5-years of P/Es. SSG Section 3 does just that. The 5-year average P/E for CTSH is on the last line as **AVERAGE PRICE EARNINGS RATIO: 21.3**.

Using the SSG Section 3 we quickly know the fair value for CTSH is 21.3 and the current value is 21.4. The current value is about the same as our estimated fair value and is considered a fair value (price).

VALUATION High & Low P/E (cont.)

▶ 3. PRICE EARNINGS HISTORY as an indicator of the future

CLOSING PRICE (09/20/16): 52.96 HIGH THIS YEAR: 69.80 LOW THIS YEAR: 51.22																
Year	A		B		C		D		E		F		G		H	
	Price		Earnings		Price Earnings Ratio		Dividend		% Payout		% High Yield					
	High	Low	Per Share	High A / C	Low B / C	Per Share	F / C * 100	F / B * 100								
2011	41.7	26.8	1.43	29.3	18.8	0.00	0.0%	0.0%								0.0%
2012	39.0	27.0	1.72	22.7	15.7	0.00	0.0%	0.0%								0.0%
2013	50.6	30.5	2.02	25.1	15.1	0.00	0.0%	0.0%								0.0%
2014	54.9	41.5	2.35	23.4	17.7	0.00	0.0%	0.0%								0.0%
2015	69.8	50.7	2.65	26.3	19.1	0.00	0.0%	0.0%								0.0%
AVERAGE		35.3		25.4	17.3											
CURRENT/TTM			2.47													0.0%
AVERAGE PRICE EARNINGS RATIO: 21.3												CURRENT PRICE EARNINGS RATIO: 21.4				

Figure 33 – CTSH SSG Section 3 (Online SSG)

If we buy CTSH today at its fair value P/E, we can expect to sell the company in the future at the same P/E and make money. We expect the company price to grow at its EPS growth rate. For CTSH we estimate 12% EPS growth. Therefore, we would expect the price to appreciate 12% annually, on average. The bad news and good news are that the company price goes up and down often for no more reason than investors are in a good or bad mood. So, buying at a fair value doesn't guarantee good results.

However, when we evaluated the quality of CTSH we evaluated this as a high-quality company with a history of consistently achieving its strategic growth plan. We therefore conclude that with time and patience and sometimes more patience 😊 we confidently expect this company to return to its average P/E over time and provide us our 12% return from earnings growth when we decide to sell.

Three Components of Returns

We make money from companies' stock price appreciation and from dividends. Price appreciation is the result of earnings growth and investor enthusiasm driving P/E expansion.

When company prices are driven below a company's average P/E usually due to poor prospective results the company becomes undervalued assuming good earnings are eventually achieved.

Good earnings for a company that is undervalued (P/E is below average P/E) will drive the company price back up to the average P/E over time.

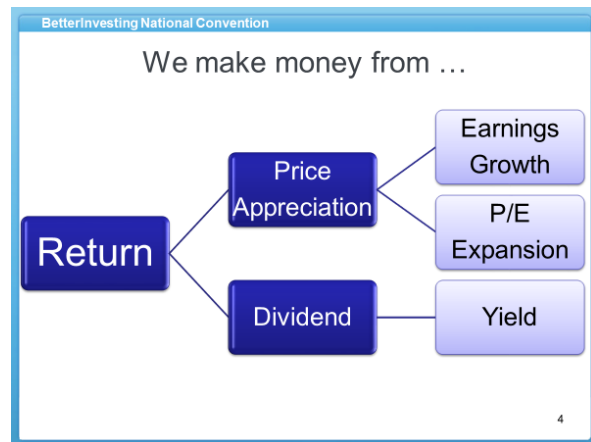


Figure 34 - Return component breakdown

Company results that surprise or promise strong profits generate investor enthusiasm that pushes company prices above those supported by earnings creating P/E expansion seen only when the company is exceeding expectations.

With our example, CTSH, their SSG section 3 (page 49, Figure 33 – CTSH SSG Section 3 (Online SSG)) shows a historical average high P/E of 25.4 compared to their average P/E of 21.3. Our strategy is to sell at, or near, the high P/E. In this example that would increase our price appreciation by almost 6%,

VALUATION High & Low P/E (cont.)

increasing our return from 12% to 18%. P/E expansion is critical to returns that exceed earnings growth and dividends.

Knowing that P/E expansion is the result of first earnings growth and then investor enthusiasm its helpful to review the P/E to Growth Ratio (PEG) since it measures if P/E expansion is possible from growth, enthusiasm or both.

P/E to Earnings Ratio (PEG)

P/E to earnings growth ratio (PEG) is a measure of price appreciation potential. As a PEG moves from its low at the bottom of the business cycle to 1 the P/E is driven by earnings. Once the P/E equals growth the PEG equals 1. As the PEG moves from 1 to the top of the business cycle, the PEG and P/E are driven by investor enthusiasm.

A PEG of 1 is the theoretical point when earnings no longer support growth. However, practice shows that this support varies by company which can be measured by dividing the 5-year historical average P/E by the 5-year earnings + dividend growth. CTSH has a 5-year average P/E of 21.3, and a 5-year average EPS growth rate of 17.6, resulting in a historical PEG of $21.3/17.6 = 1.2$, allowing us to assume CTSH earnings will drive P/E to a PEG of 1.2 before we need investor enthusiasm to drive the P/E higher.

While PEG is the ratio between growth and P/E and growth includes dividend yield and earnings growth, the traditional calculation does not include dividend yield. The Online SSG shows the PEG under the Ratios tab and on the PERT for portfolio management. Toolkit includes PEG in Section 3 of the SSG and on PERT. The online SSG and Toolkit exclude dividend yield growth. Judgments based on PEG will be addressed in Portfolio Management.

Business Cycle

We use P/E to identify the business cycle for a company. The business cycle explains why a company's P/E (and price) cycles up and down. If we can estimate the top and bottom and understand the drivers moving P/E up and down we can more accurately, and confidently, determine when to buy and sell a company's stock.

VALUATION High & Low P/E (cont.)

The business cycle is the combined result of a company's product life cycles. Growth companies must constantly add or improve their products on a regular schedule. Each product begins its life as a "startup" and if successfully introduced begins an explosive phase of growth. Over time that product's growth slows and ideally is replaced by the company with a new and improved version which begins the cycle anew.

This process of constant product renewal creates a pattern known as the business cycle. The cycle tends to be at its bottom as a flagship product is losing market share and customers are waiting for its replacement. Once the product is replaced and is obviously doing well, investor enthusiasm and strong sales drives company prices up until the market again sees signs of slowing growth.

Normal business sees lower growth and company prices at the bottom of the cycle and higher growth and prices at the top of the cycle. Our task is recognizing when downturns are the result of a failing product or simply a temporary problem fixable by management.

This repeating cycle allows us to (1) buy at or near the bottom of the business cycle to allow earnings growth to drive the price back up to the average P/E; and (2) show the patience to hold companies for P/E expansion while investor enthusiasm drives the price and P/E from the average P/E to the top of the business cycle and sell at or near the top to maximize returns.

This process is buying high-potential companies at the bottom of their business cycle (low P/E) and selling when the growth is low-potential, at the top of business cycle (high P/E).

The business cycle provides us the opportunity to buy low and sell high. At the bottom of a company's normal business cycle the price and P/E are depressed by lack of investor enthusiasm as the company's sales and earnings reflect waning growth in one or more products. But once the new and improved products or services have been introduced and earnings and sales pick back up to normal levels investors buy into increasing and returning growth and drive the price and P/E back to fair values. As the new products and services build favor with customers, investor's enthusiasm also builds in anticipation of a successful business cycle which historically continues to expand price and P/E to expected levels when the entire product life cycle continues to repeat itself.

P/E movement encapsulates the business cycle but is not exclusively driven by product sales which is good and bad for our purposes. P/E reflect the economic market cycle, sector and industry cycles, as well as a company's business cycle. P/E represents the composite of investor positive enthusiasm and negative enthusiasm. The good news is that we can follow a company's product line successes and failures; the bad news is we can seldom anticipate changes to economy and industry, but we certainly see the effects in P/E movement. The result we do anticipate is that good years may be enhanced or

BUSINESS CYCLE Ideal Example



Figure 35 - Buy Low, Sell High on the Business Cycle

VALUATION High & Low P/E (cont.)

dampened by unexpected external market factors; and bad years may be enhanced or diminished by unexpected external factors.

Estimating high and low P/E (Buy Low, Sell High)

BigCharts.com provides a detailed P/E chart to help us judge where we should consider buying and selling. Limiting this P/E chart to 5-years normally provides sufficient stable history. Occasionally, reducing the chart to less time is needed to find stable movement, but less than 5 years also assumes increased risk of too much volatility.



Figure 36 - 5-year historical daily P/E (TTM) for CTSH, 9/20/2016 (dashed lines added) (Source: www.BigCharts.com)

The sample 5-year P/E chart for CTSH illustrates how easy it is to find common-sense high and low P/Es. Picking a lower P/E to use as a buy-trigger, and a higher P/E to use as sell-trigger is done visually. Pick a P/E that trims the bottoms off all or most of the low points in the chart as a buy-below trigger. Pick a P/E that trims the tops off all or most of the high points in the chart as a sell-above trigger. We can easily see that buying near 20 and selling near 26 would have been profitable over time. (Dashed lines added for clarity).

Do you really sell each time the high P/E is reached? This possibility is explored in the portfolio management class but the choice is usually to sell a low-potential company and buy a high-potential company, or, hold the low-potential company and allow the value to either stagnate or drop.

Your estimated high P/E and estimated low P/E are recorded in Section 4 of the SSG.

4 EVALUATING RISK and REWARD over the next 5 years

Assuming one recession and one business boom every 5 years, calculations are made of how high and how low the stock might sell. The upside-downside ratio is the key to evaluating risk and reward.

A HIGH PRICE - NEXT 5 YEARS

Avg. High P/E **26.0** X Estimate High Earnings/Share 5.33 = Forecasted High Price \$ 138.6

B LOW PRICE - NEXT 5 YEARS

(a) **Avg. Low P/E** **20.0** X Estimate Low Earnings/Share 2.47 = Forecasted Low Price \$ 49.4

Figure 37 - CTSH SSG Section 4 (Online SSG)

After selecting the low and high P/E's the SSG automatically brings the 5-year estimated earnings, \$5.33, from section 1 and multiplies the high P/E x 5-year EPS for the estimated 5-year high price, \$138.60. This number is fairly useless except to calculate the total return in section 5 assuming you buy at today's price and sell in 5 years at this calculated price, \$136.60.

VALUATION High & Low P/E (cont.)

The potential reward calculation is useful only because we apply it to every company in our portfolio the same way and use the results in portfolio management to help prioritize reward potential despite the possibility of selling a company in less than 5 years or more than 5 years.

Guided Practice

1. What is the purpose of valuation?
We use valuation to determine which of our quality companies is a buy, hold, or sell.
2. What ratio is used to enumerate the value of a company's share? Why?
P/E because it provides unit pricing.
3. How do you know when a company's share value is more, or less expensive than another company's share value?
The company with the higher P/E is more expensive because you are paying more for a dollar of earnings.
4. How do you know that fair, or average value of a company's share? Undervalued? Overvalued?
When a company's P/E is nearly equal to its 5-year average P/E the value is considered fair; less than the 5-year average is undervalued; greater than the 5-year average is overvalued.
5. Where on the SSG can you find a company's 5-year average P/E? Current P/E?
SSG Section 3.
6. What are the 3 components of return when selling a company's stock?
Earnings growth, P/E Expansion, and Dividend Yield.
7. Which of these three components are expected to provide the most return when selling for profit?
P/E expansion the most, earnings, and finally dividend yield.
8. Which of the three return components is most likely to occur?
Dividends, earnings growth, and finally P/E expansion.
9. What is the PEG ratio trying to estimate?
PEG estimates potential price appreciation from earnings growth and P/E expansion. A PEG of about 1.0 (earnings growth = P/E) implies earnings growth is finished or nearly finished but growth from P/E expansion remains. As the PEG grows above 1.0, it implies less and less potential price appreciation from P/E expansion. Minimum and maximum PEG values vary by a company's share volatility.
10. What is business cycle?
The normal contraction and expansion of business as products and services build and lose market share and profitability over time causing the ebb and flow of investor enthusiasm as sales and quarterly results are published and financial pundits speculate about a company's future success or failure.

VALUATION High & Low P/E (cont.)

11. How do we track a company's business cycle?

By charting historical P/E.

12. How do we use the historical charting of P/E?

A 5-year P/E chart of a high-quality company shows the range of P/E's from top to bottom. Selecting a low P/E that appears to define the reoccurring bottom of a company's business cycle simplifies the process of selecting a low P/E that will likely prove to allow price appreciation from both earnings and P/E expansion. Similarly, selecting a high P/E that appears to approximate the reoccurring tops of the company's business cycle simplifies the judgment to pick a high P/E.

Independent Practice

1. Select an estimated high and low P/E for Biogen (BIIB).

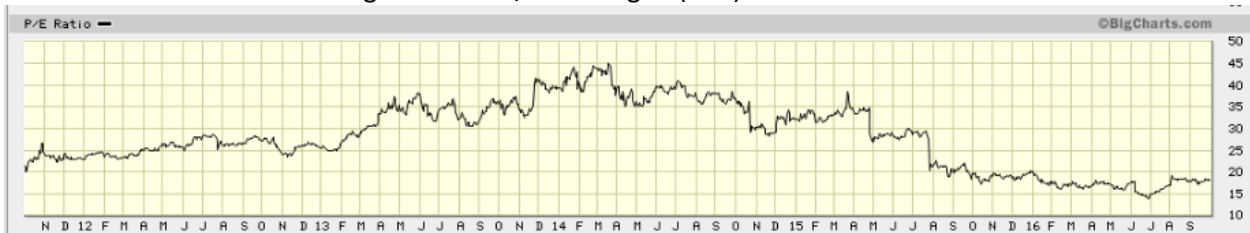


Figure 38 - BIIB 5-year P/E (TTM) chart (Source: www.BigCharts.com)

2. Select an estimated high and low P/E for Costco (COST).



Figure 39 - COST 5-year P/E (TTM) chart (Source: www.BigCharts.com)

3. Select an estimated high and low P/E for Signature Bank (SBNY).



Figure 40 - SBNY 5-year P/E (TTM) chart (Source: www.BigCharts.com)

VALUATION High & Low P/E (cont.)

4. Select an estimated high and low P/E for FactSet (FDS).



Figure 41 - FDS 5-year P/E (TTM) chart (Source: www.BigCharts.com)

Independent Practice Answers

1. Biogen (BIIB)
Consider buying below a P/E of 20. Consider selling above P/E of 30. If you can hold to a P/E above 40 don't hesitate to sell.
2. Costco (COST)
Consider buying below a P/E of 24. Consider selling above P/E of 30. Since Aug 2014, P/E's below 26 have become rare. You may want to consider buying COST below a P/E of 27 but expecting less return.
3. Signature Bank (SBNY)
Consider buying below a P/E of 18. Consider selling above P/E of 22. Potentially hold for a P/E above 26.
4. FactSet (FDS)
Consider buying below a P/E of 22. Consider selling above P/E of 30. Recent history suggests considering buying around a P/E of 25 for a reduced final return.

Note: The high and low P/E's you select for SSG Section 4 are carried onto the PERT for portfolio management. Your selected P/E's will become markers to consider a company for buy or sell – not a mandate.

Challenge

1. Estimate the business cycle duration for the four companies above. Is the business cycle currently near the top, bottom, or middle? Estimate when the next top or bottom is likely to occur based on the business cycle duration?

Challenge Answers

1. Biogen (BIIB). Bottom (Oct 2011) to Top (Mar 2014) is 29 months. Top (Mar 2014) to bottom (Jul 2016) is 28 months. Next top in 29 months? Nov 2018?
2. Costco (COST). Bottom (Oct 2011) to Top (Oct 2012) is 12 months. Top (Oct 2012) to Bottom (Apr 2013) is 6 months. Bottom (Apr 2013) to Top (Feb 2015) is 22 months. Top (Feb 2015) to Bottom (Sep 2015) is 7 months. Bottom (Sep 2015) to Top (Aug 2016) is 11 months. Next Bottom is likely 6-7 months, Feb-Mar 2017.
3. Signature Bank (SBNY). Bottom (Oct 2011) to Top (Mar 2014) is 29 months. Top (Mar 2014) to Bottom (Sept 2016) is 31 months. Next top is likely is about 30 months, or Feb 2019.

VALUATION High & Low P/E (cont.)

4. FactSet (FDS). Bottom (Jan 2013) to Top (Jun 2015) is 29 months. Top (Jun 2015) to Bottom (Feb 2016) is 8 months. Next top is likely 24 or more months out, around Feb 2018.

Note: Estimating the next top or bottom is certainly not accurate, but it does (1) provide a timeline that helps set patience expectations. (2) This exercise helps many BI Investors understand the 5-year forecast is not a fixed sell target but a timeframe that allows most companies to experience at least one top and one bottom and often multiple tops and/or bottoms within 5 years.

Chapter 8 VALUATION Risk & Reward

Goal

Use the knowledge, skills and resources to estimate risk and return.

Objectives

Use the business cycle and market movement to estimate low price

Calculate relative value (RV) ratio

Calculate upside/downside ratio (U/D)

Calculate potential return

Concepts

Risk Measures: Upside/Downside Ratio (U/D), P/E to Growth Ratio (PEG), Relative Value (RV)

Reward Measures: Total Return (TR), P/E Expansion

Tools/Resources

SSG Section 4

SSG Section 5

Instructional Background

Valuation provides risk and reward measurements used in portfolio evaluation to determine the best actions to improve the portfolio based on today's rewards and risks for each company in the portfolio.

The objective is to buy low and sell high. Using our estimated high and low P/E's we can expect to be able to buy low and sell high. However, we also want to understand the relative risk and reward for each company.

We calculate three risk ratios as part of our valuation: relative value (RV), upside/downside (U/D), and P/E to Growth (PEG, see page 50). For reward, we calculate potential return based on P/E expansion.

Relative Value (RV)

We want to buy low. Relative Value (RV) is one check during portfolio management to verify we are buying low. RV is the ratio between the current P/E and the 5-year average P/E. Buying low requires the current P/E to be less than the average P/E, or RV is less than 100%. Visually, we are using RV to ensure we are only buying companies in the lower half of their business cycle.

3 PRICE, PRICE/EARNINGS RATIO and DIVIDEND ANALYSIS

		CURRENT PRICE (P/E) 47.71 (19.3)		52-WEEK HIGH (P/E) 69.80 (28.3)		52-WEEK LOW (P/E) 45.44 (18.4)				
	Fiscal Year	High Price	Low Price	EPS	High P/E	Low P/E	Dividend	% Payout	% High Yield	
1	2011	41.7	26.8	1.43	29.3	18.8	0.000	0.0	0.0	
2	2012	39.0	27.0	1.72	22.7	15.7	0.000	0.0	0.0	
3	2013	50.6	30.5	2.02	25.1	15.1	0.000	0.0	0.0	
4	2014	54.9	41.5	2.35	23.4	17.7	0.000	0.0	0.0	
5	2015	69.8	50.7	2.65	26.3	19.1	0.000	0.0	0.0	
6	AVERAGE		35.3		25.4	17.3		0.0		
AVERAGE P/E RATIO		21.4		PROJECTED P/E RATIO		17.4		TTM EPS		2.47
CURRENT P/E RATIO		19.3		PEG RATIO		1.6		FTM EPS		2.74
RELATIVE VALUE		90.4%		PROJ. RELATIVE VALUE		81.5% 77.3%		AVG TTM + FTM EPS		2.61

Figure 42 - CTSH SSG Section 3- Relative Value (RV) highlighted (Toolkit) Note: RV hidden in Online SSG.

VALUATION Risk & Reward (cont.)

Estimating Low Price

When seeking to estimate the low price the real question is do you want the estimated low price of a normal business cycle or do we want the low price when the company experiences a bad business cycle low?

The 5-year low price is calculated using the estimated low P/E times current TTM EPS resulting in an estimated low price of \$49.40 for CTSH, which is a good estimate assuming a normal business cycle.

If a company is experiencing a bad business cycle, history has shown that 20-25% downward movement is not unusual with bad news. Consider a low price for a bad year of 80% of the normal business cycle low estimate, $80\% \times \$49.40 = \40 ; or, 80% of the current price, $80\% \times \$53 = \42 . (Since these are estimates rounding is very acceptable.)

B LOW PRICE - NEXT 5 YEARS							
(a) Avg. Low P/E	20.0	X Estimate Low Earnings/Share	2.47	=	Forecasted Low Price \$	49.4	
(b) Avg. Low Price of Last 5 Years	35.3						
(c) Recent Market Low Price	41.5						
(d) Price Dividend Will Support		Indicated Dividend	0.00	=		0.0	
		High Yield	0.00%	=			
					Selected Forecasted Low Price \$	42.0	
C ZONING using 25%-50%-25%							
Forecasted High Price	133.3	Minus Forecasted Low Price	42.0	=	91.3	Range. 25% of Range	22.8
		Buy Zone	42.0	to	64.8		
		Hold Zone	64.8	to	110.4		
		Sell Zone	110.4	to	133.3		
Present Market Price of	52.96			is in the	BUY	Zone	
D UPSIDE DOWNSIDE RATIO (POTENTIAL GAIN VS. RISK OR LOSS)							
High Price	133.3	Minus Present Price	52.96	=	80.29		
Present Price	52.96	Minus Low Price	42.0	=	10.96	=	7.3 To 1

Figure 43 - CTSH SSG Section 4 Parts B, C & D (Online SSG)

Upside/Downside (U/D) Ratio

Your selected low price will only be reflected in the U/D ratio and the pricing zone. Pricing zones are not used to determine if you will buy or sell a company when managing your portfolio, so that can be ignored.

In our example below, CTSH, option B4(a) is \$49.40 and 80% of the current price, \$52.96, is about \$42. \$49.20 is fairly close to the 52-week low of \$51.22 and results in a U/D ratio of 24. We want a low price that is safely below the 52 week low and results in a U/D between 3 and 10. 80% of the current price, \$42, results in a U/D of 7.8 validating our selection as acceptable risk.

Notice the bold BUY zoning statement. This is not a recommendation to buy the company despite what it looks like. This is a statement of acceptable risk based entirely on the U/D being above 3. When above 10, consider reevaluating the selected low price. You may need to lower your estimated low price due to a bad business cycle; or, worse case, sell the company at a loss due to falling fundamentals.

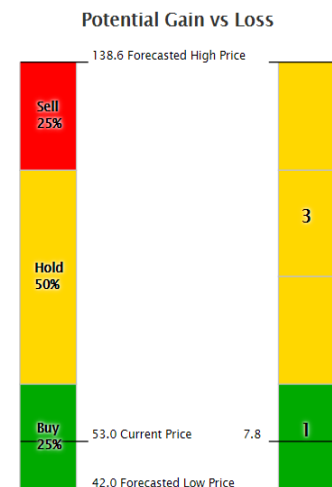


Figure 44 - Upside/Downside Ratio for CTSH (Online SSG)

VALUATION Risk & Reward (cont.)

Estimating %Payout

Percent payout is the percentage of earnings allocated to the dividend. If the payout is 20% then 80% of the earnings are retained.

Percent payout is set by a company’s Board of Directors to decide how much the dividend will be. Dividends are part of an investor’s rewards and must be included in section 5 reward calculations to provide comparable results across all companies in the portfolio.

The Board of Directors is normally very reluctant to reduce dividends. When it does happen, the Board is signaling a serious finance problem and warrants a serious consideration of selling the company.

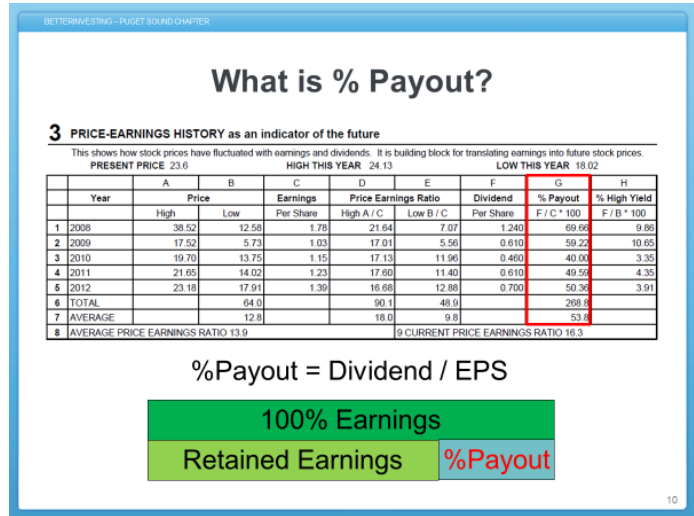


Figure 45 – What is % Payout - Borrowed from PSC SSG Judgement - Core Class 2

Calculating Potential Return

Section 5 calculates potential future return, not historical return. This calculation is strictly estimated future annual return with no consideration of previous purchases. The potential return assumes buying at today’s price and selling in 5 years either at the estimated high P/E from section 4, or estimated average P/E (calculated) from section 4.

Section 5 return calculations included dividend yield plus price appreciation. The combination of both allows a fair comparison between dividend and non-dividend companies.

5 5-YEAR POTENTIAL

This combines price appreciation with dividend yield to get an estimate of total return. It provides a standard for comparing income and growth stocks.

A	Indicated Annual Dividend	0.75	=	0.0307	=	3.1 %	Current Yield
	Closing Price	46.04					
B AVERAGE YIELD - USING FORECAST HIGH P/E	Avg. % Payout	37.7 %	=	1.3 %			
	Forecast High PE	28.00					
C COMPOUND ANNUAL RETURN - USING FORECAST HIGH P/E	Annualized Appreciation	10.6 %					
	Average Yield	1.3 %					
	Annualized Rate of Return	12.0 %					
D COMPOUND ANNUAL RETURN - USING FORECAST AVG P/E	Annualized Appreciation	8.1 %					
	Average Yield	1.5 %					
	Annualized Rate of Return	9.7 %					

Figure 46 - NVO Section 5 using Online SSG, 9/24/2016 with dividend

Two calculations are used for the estimated return. The first assumes the company is sold at estimated high P/E, or, at the top of the business cycle, and the earnings have grown all 5 years at your estimated growth rate. This “high P/E” annual return is labeled: “Compound Annual Return – Using Forecast High P/E”.

VALUATION Risk & Reward (cont.)

The estimated annual return is also calculated using the estimated average P/E. The average P/E annual return calculation assumes the company is sold in the middle of the business cycle likely because the company is experiencing modest result but insufficient to generate fair results. This “average P/E” estimate is labeled “Compound Annual Return – Using Forecast Average P/E”.

Toolkit uses the same two calculations but labels them differently: Total Return (TR) is the same as “Compound Annual Return – Using Forecast High P/E”. Projected Average Return (PAR) is the same as “Compound Annual Return – Using Forecast Average P/E”. Total Return (TR) label is used on the PERT for both SSG online and Toolkit.

Portfolio management will use both values to prioritize reward. In general, the company with the highest potential reward is our best buy; and the company with the lowest potential return is the best sell.

In practice, companies with a potential total return (TR) of 15%, or better are considered possible buys for the portfolio. Companies with a total return (TR) less than 10% are candidates for sale and replacement by a company with a high potential reward.

5 TOTAL RETURN ANALYSIS

A CURRENT YIELD					
Present Full Year's Dividend \$	0.000	+	Current Price of Stock \$	54.41	= <u>0.0</u> % Present Yield or % Returned on Purchase Price
B AVERAGE YIELD - USING FORECAST HIGH P/E					
Avg. % Payout	0.0	+	Forecast High P/E	25.0	= Avg. Yield <u>0.0</u>
AVERAGE YIELD - USING FORECAST AVERAGE P/E					
Avg. % Payout	0.0	+	Forecast Avg P/E	22.5	= Avg. Yield <u>0.0</u>
C % COMPOUND ANNUAL TOTAL RETURN - USING FORECAST HIGH P/E					
Average Yield	0.0	% +	Annual Appreciation	19.6	% = Compound Annual Total Return <u>19.6</u> %
D % PROJECTED AVERAGE RETURN - USING FORECAST AVERAGE P/E					
Average Yield	0.0	% +	Annual Appreciation	17.1	% = Projected Average Total Return <u>17.1</u> %

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Figure 47 - CTSH SSG Section 5 (Source: Toolkit)

Guided Practice

1. What is the purpose of valuation?
We use valuation to determine which of our quality companies is a buy, hold, or sell.
2. Do we make final buy/sell decisions based on the SSG?
No, we use the information from all the SSG's, consolidated in the PERT, as part of the portfolio management process to make final buy/sell decisions that improve the portfolio.
3. What are the reward/risk measures that the SSG provides the PERT for portfolio management decisions?
Risk: Relative Value (RV), P/E to Growth (PEG), and Upside/Downside (U/D)
Reward: Potential Return based on P/E Expansion (High and Low P/E's)
4. How does Relative Value (RV) measure risk?
RV measures how much the current P/E is above the 5-year average P/E (RV > 1); or, how much the current P/E is below the 5-year average P/E (RV < 1).

VALUATION Risk & Reward (cont.)

5. How does P/E to Growth (PEG) measure risk?
PEG measures how much the current P/E is above the estimated growth rate ($PEG > 1$); or, how much the current P/E is below the estimated growth rate ($PEG < 1$).
6. How does Upside/Downside (U/D) measure risk?
U/D measures how many times the current price is from the estimated high price compared to the distance above the estimated low price. If $U/D = 1.0$ then the current price is equal distance between the two values.
7. When estimating the low price what are your two targets?
The bottom of a normal business cycle, or, the bottom of a bad business cycle.
8. What is a good calculation to determine the bottom of a normal business cycle?
 $TTM\ EPS \times Estimated\ Low\ P/E = Estimated\ low\ price\ (normal\ business\ cycle)$
9. What is a good calculation to determine the bottom of a bad business cycle? Estimated normal business cycle low price $\times 80\%$; or, 80% of current price.
10. What is the target upside/downside ratio? What can you change to manage this ratio.
The target U/D ratio is between 3 and 10. Changing the estimated low price will change the U/D ratio.
11. When would you reevaluate your selected low price?
When the U/D is above 10, you may need to lower the estimated low price due to a bad business cycle, or, sell the company at a loss due to falling fundamentals.
12. What is percent payout?
Percent payout is the percent of earnings to Board of Directors has allocated to the dividend payment.
13. When dividends are reduced by the Board what should you consider?
Selling the company due to financial problems.
14. Does the SSG Section 5 potential total return calculation include any historical price appreciation?
No, section 5 return calculations assume purchasing today and estimate the price appreciation when sold in 5 years.
15. What is the difference between the two section 5 return calculations?
One uses the estimated high P/E and the other uses the estimated average P/E.
16. What is the same about the two section 5 return calculations?
Both include dividends and both assume 5 years' earnings growth at the estimated EPS growth rate from section 1.
17. Why include two return calculations?
The "high P/E" calculation assumes a good business cycle; the "average P/E" assumes not a good business cycle.

VALUATION Risk & Reward (cont.)

18. How much estimated return is typically required for a company to be considered a potential buy?

Assuming our goal is 15% return, then a minimum of 15% return is required to be considered a potential buy based on reward.

Independent Practice

1. Review the percent payout for each of the dividend stocks in your portfolio and adjust as needed.

PART TWO

Portfolio Management Magic

How to select stocks and manage your portfolio

Chapter 9 PORTFOLIO MANAGEMENT OVERVIEW

Goal

Use the knowledge, skills and resources needed to actively manage a portfolio of quality-growth companies to achieve a 5-year annualized return of 15% or better.

Objectives

Create a report showing the current status of a portfolio with sufficient detail and analysis such that recommendations can be derived that will achieve justified incremental improvements to the portfolio.

Identify and explain the purpose of the four parts of a portfolio review.

Concepts

Justifiable Incremental Improvements

Tools/Resources

Portfolio Review Checklist

Valuation by Company and Member

Portfolio Review Report

Portfolio Evaluation Review Technique (PERT)

Instructional Background

BetterInvesting (BI) combines multiple investment strategies, particularly: growth stocks and value stocks. Growth investors buy growing companies and expect continued increasing earnings to drive the price over time. Value investors buy stocks with a price below the company's intrinsic (fair) value and expects price appreciation over time as the market recognizes that undervaluation and increases the price to correctly (fairly) value the company. In *Stock Selection Guide (SSG) Magic* you learned how to evaluate a company's growth quality, estimate future growth, and determine its current value; undervalued, overvalued, or fairly valued.

The SSG evaluation seems to provide all the information we need to buy, hold or sell a stock. The problem remaining is which stock to buy or sell. How do all the potential buy or sell opportunities stack up against each other?

The goal of portfolio management is to incrementally improve the portfolio each month. Portfolio management is used to determine which stocks to buy or sell and how each action will improve the portfolio. This course explains how to combine the information from the SSGs into a single report that identifies which buys and sells will improve your portfolio.

Portfolio reviews consist of four parts: (1) diversification, (2) quality, (3) value, and (4) performance. Diversification checks the balance of risk across companies and sectors while maintaining adequate growth. Quality management checks that growth estimates are being achieved and flags companies whose growth is lagging for investigation. Valuation checks the buy, sell, or hold status. Performance monitors your progress.

A portfolio review report (Figure 48) is used to provide the information needed to select justifiable incremental improvements (opportunities) to your portfolio.

PORTFOLIO MANAGEMENT OVERVIEW (cont.)

The process to create a portfolio review is to collect and record the current information for each section; comparing goals and current status, identify and record improvement opportunities at the end of each section; and finally consolidating, reconciling and recording the opportunities into a final list at the end of the review for consideration.

PORTFOLIO REVIEW		
A. Diversification = risk & reward mitigation	Goal	
1. Percentage by Size (% Small [Fast]/% Medium/%Large [Slow])	25%/50%/25%	
2. %Estimated Portfolio Growth Rate = %Est EPS + %Yield	~10%	
3. Number & Percent of Sectors (#/Largest Sector @ %)	3+/Sector<30%	
4. Number & Percent of Stocks (#/Largest Stock @ %)	15-25/Stock<20%	
5. Percent Cash	~5%	
Opportunities to improve the portfolio diversification: A1: Use Company Size Diversification Report A2: Sort PERT report by Est. EPS Growth to find median. Sort PERT report by Yield to find median. Add together for portfolio growth rate. A3: Use Diversification Report for %Sector. Manage risk with < 30% max for sectors. A4: Use Valuation Report for count and % portfolio. Manage company risk to < 20% max for any one stock. A5: Use Valuation Report. Keep cash to about 5% or less.		
B. Quality = consistent & predictable growth		
1. Growth Estimates – PERT		
a. TTM EPS - Missed estimates		
Opportunities to improve the portfolio quality: B1: Use the PERT TTM EPS to identify holdings missing our EPS growth estimates (TTM EPS = Magenta). - Reasons and trends for missed estimates - temporary or long-term?		
C. Value = Buy low; Sell high		
1. Current BUY LOW opportunities		
a. Stocks w/Total Return (TR) > nn.n% (see D2a below)		
b. Projected P/E at or near estimated low avg P/E		
c. PEG < 1.5 and RV < 100 and U/D > 3		
d. Meets all three buy criteria		
2. Current SELL HIGH opportunities		
a. Stocks w/Total Return (TR) < 10% (market)		
b. Projected P/E at or near estimated high avg P/E		
c. PEG > 1.5 and RV > 100 and U/D < 3		
d. Meets all sell criteria above		
C1&C2: Update and review your SSGs for all identified buys and sells.		
D. Performance = Beat market and/or 15% real & unrealized returns	Goal	
1. History of buy low/sell high (Capital Gains Report)		
a. % winners > \$0 gain	80%+	
2. Portfolio Potential Return (Summary Report)		
a. %Total Return (TR)	15%+	
3. Investment Performance Report		
a. Last 5-years vs. Market	15%+	
b. Last 3-years vs. Market	15%+	
c. 1-year (TTM) vs. Market	15%+	
Opportunities to improve performance: D1: Use Capital Gains and Losses report to calculate % winners > \$0 D2: Find %Total Return in Summary Report header (online SSG) or Portfolio Report Card (Toolkit 6). D3: Use club accounting's Investment Performance Report to calculate club vs. market performance.		
Consolidated portfolio recommendations: • Combine opportunities into single list – addressing any conflicting opportunities		

Figure 48 - Portfolio Review template

BetterInvesting (BI) portfolios consist of high-quality growth securities and cash. Securities are primarily represented by stocks of public companies but can include assets such as mutual funds and ETFs that provide groups of stocks.

PORTFOLIO MANAGEMENT OVERVIEW (cont.)

Ideally, every buy and sell recommendation to a portfolio will improve a portfolio. Improvement is incremental, not monumental. The expectation is that your portfolio will be reviewed regularly (monthly) and the result used to identify and choose improvements. Your selected actions and ultimate result will differ based on your tolerance for risk and the quality of your company evaluation judgements.

This overview outlines what that final product looks like and the steps needed to achieve the end results, so you have a sense of the destination as you delve into the details along the way.

The **Portfolio Review Checklist** (see page 107 for details) is designed to walk you through the steps needed to complete a portfolio review, each month.

1. Update portfolio data and prices (automated with BI tools)
2. Check diversification (sector and company diversity, portfolio estimated growth rate)
3. Check quality (actual TTM EPS growth vs. estimated EPS growth)
4. Update valuation (justifiable buys and sells)
5. Check performance (realized, unrealized, potential return)
6. Consolidate recommendations and reconcile improvement opportunities

Four reports are needed each month to identify justified incremental improvement opportunities: (1) Valuation by Company; (2) Valuation by Member; (3) Portfolio Review (what this course is mostly about); and (4) the Portfolio Evaluation Review Technique (PERT). (Yes, meeting minutes will also be distributed, but is mostly ignored by this course as not integral to this methodology.)

Since this technique is used to identify incremental improvements you need to understand what you are seeking. First and foremost, you must understand the ultimate goal is to make money (build wealth) by growing your investments at 15% or better. You are evaluating your portfolio for diversification, quality, valuation, and performance for risk and reward. Every buy and sell that improves or maintains these elements is what you are seeking. The detailed criteria will be explained in the following lessons.

Valuation by Company is a report of what you own/hold by company and how much cash you have today. This report is needed to tell us how much cash we have, and the percent of portfolio held by each company.

PORTFOLIO MANAGEMENT OVERVIEW (cont.)

PORTFOLIO REVIEW		
A. Diversification = risk & reward mitigation		Goal
1. Percentage by Size (% Small [Fast]/% Medium/%Large [Slow])		25%/50%/25%
2. %Estimated Portfolio Growth Rate = %Est EPS + %Yield		~10%
3. Number & Percent of Sectors (#/Largest Sector @ %)		3+/Sector<30%
4. Number & Percent of Stocks (#/Largest Stock @ %)		15-25/Stock<20%
5. Percent Cash		~5%
Opportunities to improve the portfolio diversification: A1: Use Company Size Diversification Report A2: Sort PERT report by Est. EPS Growth to find median. Sort PERT report by Yield to find median. Add together for portfolio growth rate. A3: Use Diversification Report for %Sector. Manage risk with < 30% max for sectors. A4: Use Valuation Report for count and % portfolio. Manage company risk to < 20% max for any one stock. A5: Use Valuation Report. Keep cash to about 5% or less.		
B. Quality = consistent & predictable growth		
1. Growth Estimates – PERT		
a. TTM EPS - Missed estimates		
Opportunities to improve the portfolio quality: B1: Use the PERT TTM EPS to identify holdings missing our EPS growth estimates (TTM EPS = Magenta). - Reasons and trends for missed estimates - temporary or long-term?		
C. Value = Buy low; Sell high		
1. Current BUY LOW opportunities		
a. Stocks w/Total Return (TR) > nn.n% (see D2a below)		
b. Projected P/E at or near estimated low avg P/E		
c. PEG < 1.5 and RV < 100 and U/D > 3		
d. Meets all three buy criteria		
2. Current SELL HIGH opportunities		
a. Stocks w/Total Return (TR) < 10% (market)		
b. Projected P/E at or near estimated high avg P/E		
c. PEG > 1.5 and RV > 100 and U/D < 3		
d. Meets all sell criteria above		
C1&C2: Update and review your SSGs for all identified buys and sells.		
D. Performance = Beat market and/or 15% real & unrealized returns		Goal
1. History of buy low/sell high (Capital Gains Report)		
a. % winners > \$0 gain		80%+
2. Portfolio Potential Return (Summary Report)		
a. %Total Return (TR)		15%+
3. Investment Performance Report		
a. Last 5-years vs. Market		15%+
b. Last 3-years vs. Market		15%+
c. 1-year (TTM) vs. Market		15%+
Opportunities to improve performance: D1: Use Capital Gains and Losses report to calculate % winners > \$0 D2: Find %Total Return in Summary Report header (online SSG) or Portfolio Report Card (Toolkit 6). D3: Use club accounting's Investment Performance Report to calculate club vs. market performance.		
Consolidated portfolio recommendations: • Combine opportunities into single list – addressing any conflicting opportunities		

Figure 50- Portfolio Review form

Portfolio Evaluation Review Technique (PERT) report has long been the primary tool BetterInvesting (BI) uses to evaluate a portfolio. This report is best used to visually show which buys and sells improve the potential return. Sorting the PERT will quickly identify and prioritize buys and sells; risk and reward.

Report Options

Summary **PERT** Diversification

Report Details

Show All entities Search all columns:

Company Name	Div	Yield	Est EPS Nxt 12 Mo	EPS		Sales		Pre-Tax Profit			TTM EPS		Proj PE	Price	Proj RV	Proj 5Yr P/E Ratios			Est EPS Growth	PEG Ratio	UID Ratio	% Total Return	Est 5 Years			
				Qtr End	\$	% Chg	Mill \$	% Chg	Mill \$	% Chg	Sales	%				\$	% Chg	Hi					Avg	Low	Low Price	High Price
Air Lease	0.43	1.0	5.55	09/19 09/18	1.34 1.32	1.5 % 1.5 %	530.9 450.7	17.8 % 17.8 %	193.8 179.4	8.0 % 8.0 %	36.5 % 39.8 %	4.91 7.58	-35.2 % 7.58	8.0	44.35	8.0	12.0	9.5	7.0	13.0	0.6	5.8	18.5	34.4	101.7	
Alibaba Group Holdin	0.00	0.0	9.70	09/19 09/18	3.92 1.12	250.3 % 1.2 %	16968.5 12517.3	35.6 % 35.6 %	12193.2 2537.9	380.4 % 380.4 %	71.9 % 20.3 %	8.39 3.48	141.0 % 3.48	21.2	205.47	68.3	37.0	31.0	25.0	15.6	1.4	7.8	25.5	150.0	640.9	
Amgen	5.28	2.4	13.68	09/19 09/18	3.27 2.86	14.3 % 2.8 %	5737.0 5904.0	-2.8 % 2.8 %	2277.0 2094.0	8.7 % 8.7 %	39.7 % 35.5 %	13.03 12.12	7.5 % 12.12	16.3	222.95	88.1	22.0	18.5	15.0	5.0	3.3	2.0	12.0	152.0	365.9	
Axos Financial	0.00	0.0	2.96	09/19 09/18	0.66 0.58	13.8 % 0.5 %	122.8 102.8	19.5 % 19.5 %	56.7 49.3	15.0 % 15.0 %	46.1 % 47.9 %	2.57 2.45	-4.9 % 2.45	9.5	27.96	70.1	16.0	13.5	11.0	15.0	0.6	6.9	24.2	20.0	82.7	
Bank OZK	0.80	2.9	3.59	09/19 09/18	0.81 0.58	39.7 % 0.5 %	243.6 242.6	0.4 % 0.4 %	136.5 99.8	36.7 % 36.7 %	56.0 % 41.2 %	3.42 3.49	-2.0 % 3.49	7.7	27.59	61.4	15.0	12.5	10.0	5.1	1.5	5.0	20.8	20.0	65.8	
Constellation Brands	2.96	1.6	4.52	11/19 11/18	1.85 1.56	18.6 % 1.5 %	1999.4 1972.6	1.4 % 1.4 %	-292.4 347.4	-184.2 % -184.2 %	-14.6 % 17.6 %	4.15 13.33	-68.9 % 13.33	42.2	190.90	228.1	22.0	18.5	15.0	9.0	4.7	8.4	24.0	150.0	534.0	
CVS Health	2.00	2.8	6.48	09/19 09/18	1.17 1.36	-14.0 % 1.3 %	64547.0 47269.0	36.6 % 36.6 %	2133.0 1899.0	12.3 % 12.3 %	3.3 % 4.0 %	5.89 1.56	277.6 % 1.56	11.0	70.97	59.2	22.0	18.5	15.0	10.0	1.1	3.8	25.3	35.0	208.7	
Monster Beverage	0.00	0.0	2.23	09/19 09/18	0.55 0.48	14.6 % 0.4 %	1133.6 1016.2	11.6 % 11.6 %	398.6 342.6	16.3 % 16.3 %	35.2 % 33.7 %	1.99 1.69	17.8 % 1.69	29.8	66.60	99.4	35.0	30.0	25.0	12.2	2.4	2.7	13.2	45.0	123.8	

Figure 51-PERT (sample)

PORTFOLIO MANAGEMENT OVERVIEW (cont.)

Upon completion of these reports:

- Diversification will show you what to avoid or seek
- Quality will influence increased or reduced risk and reward
- Valuation will identify specific companies that achieve all risk and reward requirements
- Performance will increase your awareness of behaviors that need to be repeated and those that need increased scrutiny; and finally the PERT will visualize your choices by priority allowing easy selection of action based on available cash and current opportunities.

Guided Practice

1. What are the 4 reports used at the monthly meeting?
(1) Valuation by Company, (2) Valuation by Member; (3) Portfolio Review Report and (4) PERT
2. What are the four sections of a portfolio review?
Diversification, Quality, Value, Performance
3. Where do you find a blank Portfolio Review form.
You can either use a word processor to create your own form, or, copy the blank in the appendix of this book, or, download the template from the author (see Tools and Resources, page 63).

Chapter 10 DIVERSIFICATION

Goal

Use the knowledge, skills and resources needed to manage portfolio growth for 10%+ EPS growth with acceptable risk distribution.

Objectives

Identify and explain the four categories used to measure and balance portfolio diversification.

Identify the guidelines for each diversification category.

Explain how diversification is used to manage portfolio growth rate.

Concepts

Portfolio Diversification

Sector Diversification

Size Diversification

Company Diversification

Tools/Resources

Portfolio Report

Instructional Background

Diversification is a measurement of how your companies are distributed across economic sectors, company size (revenue), and each individual company. Your diversification goals are (1) distribution of risk, and (2) optimization of reward.

A portfolio of high-quality growth companies is accomplished by buying only companies that have demonstrated a consistent growth for 5-10 years. A portfolio review of your companies requires that you monitor the quality of each company to verify their continued high-quality. These criteria set a high bar and excludes most public companies.

Your portfolio is improved monthly by buying companies at a low valuation with acceptable risk and selling companies at a high valuation with unacceptable risk. And unfortunately, selling any companies that have lost their quality rating, regardless of valuation.

Your portfolio performance, like a school report card, explains how well your portfolio is achieving your portfolio goals. Our portfolio goals have three measurable objectives: (1) profit on 80%+ trades; (2) maintain a portfolio potential return of 15% or better; and (3) meet or beat the market index while achieving a return of 15%+.

Despite all the guidance that follows, it is not possible to have a portfolio with high reward and low risk. Each time you are faced with making portfolio changes to be more, or less, risky you will choose based on your personal circumstances at the time. It's your money; it's your choice.

Evaluating your portfolio diversification will influence which company to buy and sell. Each buy and sell will ideally improve your portfolio's diversification/balance in one or more areas: (1) size diversification; (2) sector diversification; (3) company diversification and/or (4) uninvested cash.

DIVERSIFICATION (cont.)

Diversification

We measure diversification across five attributes: (1) size (revenue) diversification; (2) estimated portfolio growth rate; (3) economic sector diversification; (4) number and percentage of companies and (5) percent of cash. Successful diversification will distribute risk such that no one company or one sector will have an over-weighted impact on the portfolio and the average portfolio growth rate is at or near the average market growth rate; historically about 10%, for a balanced risk and reward.

The Portfolio Review form begins with a measurement of diversification by size.

PORTFOLIO REVIEW		
A. Diversification = risk & reward mitigation	Goal	
1. Percentage by Size (% Small [Fast]/% Medium/%Large [Slow])	25%/50%/25%	
2. %Estimated Portfolio Growth Rate = %Est EPS + %Yield	~10%	
3. Number & Percent of Sectors (#/Largest Sector @ %)	3+/Sector<30%	
4. Number & Percent of Stocks (#/Largest Stock @ %)	15-25/Stock<20%	
5. Percent Cash	~5%	
Opportunities to improve the portfolio diversification: A1: Use Company Size Diversification Report A2: Sort PERT report by Est. EPS Growth to find median. Sort PERT report by Yield to find median. Add together for portfolio growth rate. A3: Use Diversification Report for %Sector. Manage risk with < 30% max for sectors. A4: Use Valuation Report for count and % portfolio. Manage company risk to < 20% max for any one stock. A5: Use Valuation Report. Keep cash to about 5% or less.		

Figure 52 - Portfolio Review Diversification Section

Size (revenue) diversification is used to balance risk and growth by aiming for 25% smaller high-growth companies, 50% medium sized, medium growth companies, and 25% larger slower-growth companies. With this balance the portfolio growth rate should be around the same as the market, about 10%.

Growth companies require sales (revenue) growth; or top-line growth. Common sense and correlation studies show that annual sales correlates well with sustainable growth rates. Larger companies tend to grow slower than smaller companies simply due to size.

BI uses annual revenue (sales) to define company size and estimate sales growth rate. For growth management BI categorizes growth in the following manner. (Note. Revenue criteria has adjusted over the years. In the 1980's a small company was defined as any company with less than \$250M annual revenue.)

	Small, high-growth	Medium, size & growth	Large, slow-growth
By Revenue	<\$1B	\$1B-\$10B	>\$10B
By Sales Growth	≥ 12%	7%-12%	≤7%
% Portfolio Goal	25%	50%	25%

DIVERSIFICATION (cont.)

The “Company Size Diversification Report” provides the details needed for growth diversification.

Report Details		PM Magic		Study data	
Size	Security	Last FY Sales (Millions)	Market Value (Security)	% of Portfolio (Security)	% of Portfolio (Size)
Small - <\$1B in Sales					
	Axos Financial	488.54	\$ 0.00	0%	4.4%
	Bank OZK	991.68	\$2,127.22	4.4%	
Medium - \$1B to \$10B in Sales					
	Air Lease	1,679.70	\$4,096.03	8.5%	
	Constellation Brands	8,116.00	\$1,640.59	3.4%	
	Monster Beverage	3,807.18	\$1,774.90	3.7%	
	Signature Bank	1,322.27	\$4,849.06	10.1%	
	Skyworks Solutions	3,376.80	\$2,803.26	5.8%	
	Tractor Supply	7,911.05	\$5,372.17	11.2%	
	Ulta Beauty	6,716.62	\$5,957.08	12.4%	
	United Rentals	8,047.00	\$6,644.07	13.8%	
Large - >\$10B in Sales					
	Alibaba Group Holdin	56,144.82	\$2,357.73	4.9%	26.6%
	Angen	23,747.00	\$1,057.50	2.2%	
	CVS Health	194,579.00	\$2,372.30	4.9%	
	Southwest Airlines	22,428.00	\$641.56	1.3%	
	T.J.X Companies	38,972.93	\$3,482.56	7.3%	
	Visa	22,977.00	\$2,854.84	5.9%	
		Total	\$48,030.87	100.0%	100.0%

Figure 53- Diversification by Annual Sales

Figure 53 shows our sample portfolio with 4.4% fast-growth companies; 69.0% medium-growth companies; and 26.6% slow-growth companies. This portfolio seems to be missing our goal of 25% smaller fast-growth; 50% medium; and 25% larger slow-growth. The obvious guidance for buying and selling would be to focus on buying fast-growth companies while potentially selling medium sized companies with higher valuations.

PORTFOLIO REVIEW		
A. Diversification = risk & reward mitigation	Goal	
1. Percentage by Size (% Small [Fast]/% Medium/%Large [Slow])	25%/50%/25%	4.4%/69.0%/26.6%

Figure 54- Portfolio Review Diversification by growth using revenue

Figure 54 shows how we’d fill out the Portfolio Review growth diversification line using the “Company Size Diversification Report” results. A notable lack of smaller fast-growing companies suggests the portfolio may be growing slower than the market, but with reduced risk. Potential action would include improving the portfolio size diversification by adding more small, fast-growing stocks and potentially moving money from medium sized companies into smaller, fast-growth companies.

Too many larger companies can be deceiving in a portfolio of high-quality growth companies. Companies like Apple have a history of growing faster than their size would imply. Therefore, we estimate the portfolio growth rate to help verify the resulting estimated portfolio growth rate and market growth rate using company size.

Estimated Portfolio Growth Rate

With luck BI may provide the calculated dollar-weighted growth rate for the portfolio in the future but until that’s available we estimate the EPS growth from the PERT with a couple of sorts and addition. For the math enabled, use a spreadsheet to calculate the dollar-weighted sales growth rate. For the rest of the world we can approximate adding the median portfolio Est. EPS Growth to the median portfolio Yield from the PERT as shown below.

DIVERSIFICATION (cont.)

Step 1. Sort (click on column title) the PERT by Est EPS Growth (Figure 55). Find the middle (median) value of 17 positions; 11.0% (count down 9; cash is #1 but not shown).

Company Name	Div	% Yield	Est EPS Next 12 Mo	EPS			Sales			Pre-Tax Profit			TTM EPS			Proj PE	Price	Proj RV	Proj 5Yr P/E Ratios			Est EPS Growth	PEG Ratio	UID Ratio	% Total Return	Est 5 Years	
				Qtr End	\$	% Chg	Mill \$	% Chg	Mill \$	% Chg	% Sales	\$	% Chg	Hi	Avg				Low	Low Price	High Price						
Amgen	5.28	2.4	13.68	09/19 09/18	3.27 2.86	14.3 % -14.3 %	5737.0 5904.0	-2.8 % -2.8 %	2277.0 2094.0	8.7 % -8.7 %	39.7 % 35.5 %	13.03 12.12	7.5 % -7.5 %	16.3	222.95	88.1	22.0	18.5	19.0	5.0	3.3	2.0	12.0	152.0	365.9		
Bank OZK	0.80	2.9	3.59	09/19 09/18	0.81 0.58	39.7 % -39.7 %	243.6 242.6	0.4 % -0.4 %	136.5 99.8	36.7 % -36.7 %	56.0 % 41.2 %	3.42 3.49	-2.0 % -2.0 %	7.7	27.59	61.4	15.0	12.5	10.0	5.1	5.0	5.0	20.8	20.0	65.8		
Southwest Airlines	0.70	1.2	4.58	12/19 12/18	0.98 1.17	-16.2 % -16.2 %	5729.0 5704.0	0.4 % -0.4 %	666.0 817.0	-18.5 % -18.5 %	11.6 % 14.3 %	4.28 4.31	-0.7 % -0.7 %	12.3	56.25	98.3	15.0	12.5	10.0	7.0	1.8	2.4	10.9	42.0	90.0		
Skyworks Solutions	1.58	1.4	5.21	12/19 12/18	1.50 1.60	-6.3 % -6.3 %	896.1 972.0	-7.8 % -7.8 %	278.7 323.8	-13.9 % -13.9 %	31.1 % 33.3 %	4.78 6.25	-23.5 % -23.5 %	22.4	116.88	102.0	30.0	22.0	14.0	9.0	2.5	1.8	14.2	60.0	220.6		
Constellation Brands	2.96	1.6	4.52	11/19 11/18	1.85 1.56	18.6 % -18.6 %	1999.4 1972.6	1.4 % -1.4 %	-292.4 -347.4	-184.2 % -184.2 %	-14.6 % 17.6 %	4.15 13.33	-68.9 % -68.9 %	42.2	190.90	220.1	22.0	18.5	19.0	9.0	3.7	8.4	24.0	150.0	534.0		
CVS Health	2.00	2.8	6.48	09/19 09/18	1.17 1.36	-14.0 % -14.0 %	64547.0 47269.0	36.6 % -36.6 %	2133.0 1899.0	12.3 % -12.3 %	3.3 % 4.0 %	5.89 1.56	277.6 % -277.6 %	11.0	70.97	59.2	22.0	18.5	19.0	10.0	1.1	3.8	25.3	35.0	208.7		
Ulta Beauty	0.00	0.0	13.16	10/19 10/18	2.25 2.18	3.2 % -3.2 %	1682.5 1560.0	7.9 % -7.9 %	168.7 170.5	-1.1 % -1.1 %	10.0 % 10.9 %	11.86 10.74	10.4 % -10.4 %	20.8	273.70	65.0	37.0	32.0	27.0	11.0	1.9	3.5	20.0	155.6	682.1		
Signature Bank	1.12	0.8	12.27	09/19 09/18	2.75 2.84	-3.2 % -3.2 %	334.0 329.3	1.4 % -1.4 %	198.5 204.8	-3.0 % -3.0 %	59.4 % 62.2 %	11.05 8.41	31.4 % -31.4 %	11.8	145.01	76.3	21.0	15.5	10.0	11.0	1.1	3.5	17.6	93.0	326.6		
Tractor Supply	1.20	1.3	5.08	09/19 09/18	1.02 0.95	7.4 % -7.4 %	1984.1 1881.6	5.4 % -5.4 %	156.9 148.7	5.5 % -5.5 %	7.9 % 7.9 %	4.56 4.08	11.8 % -11.8 %	18.5	93.99	86.1	25.0	21.5	18.0	11.3	1.6	4.2	16.5	70.0	194.7		
TJX Companies	0.74	1.2	2.84	10/19 10/18	0.68 0.61	11.5 % -11.5 %	10451.3 9825.8	6.4 % -6.4 %	1122.1 1046.5	7.2 % -7.2 %	10.7 % 10.7 %	2.55 2.45	4.3 % -4.3 %	21.4	60.93	104.5	24.0	20.5	17.0	11.5	1.9	2.3	11.7	43.4	100.6		
Monster Beverage	0.00	0.0	2.23	09/19 09/18	0.55 0.48	14.6 % -14.6 %	1133.6 1016.2	11.6 % -11.6 %	398.6 342.6	16.3 % -16.3 %	35.2 % 33.7 %	1.99 1.69	17.8 % -17.8 %	29.8	66.60	99.4	35.0	30.0	25.0	12.2	2.4	2.7	13.2	45.0	123.8		
Air Lease	0.43	1.0	5.55	09/19 09/18	1.34 1.32	1.5 % -1.5 %	530.9 450.7	17.8 % -17.8 %	193.8 179.4	8.0 % -8.0 %	36.5 % 39.8 %	4.91 7.58	-35.2 % -35.2 %	8.0	44.35	84.1	12.0	9.5	7.0	13.0	0.6	5.8	18.5	34.4	101.7		

Figure 55- PERT sorted by Est EPS Growth

Step 2. Sort (click on column title) the PERT by Yield and find the middle value (1.0%) of 17 positions (count down 9, cash is #1 but not shown).

Company Name	Div	% Yield	Est EPS Next 12 Mo	EPS			Sales			Pre-Tax Profit			TTM EPS			Proj PE	Price	Proj RV	Proj 5Yr P/E Ratios			Est EPS Growth	PEG Ratio	UID Ratio	% Total Return	Est 5 Years	
				Qtr End	\$	% Chg	Mill \$	% Chg	Mill \$	% Chg	% Sales	\$	% Chg	Hi	Avg				Low	Low Price	High Price						
Ulta Beauty	0.0	0.0	13.16	10/19 10/18	2.25 2.18	3.2 % -3.2 %	1682.5 1560.0	7.9 % -7.9 %	168.7 170.5	-1.1 % -1.1 %	10.0 % 10.9 %	11.86 10.74	10.4 % -10.4 %	20.8	273.70	65.0	37.0	32.0	27.0	11.0	1.9	3.5	20.0	155.6	682.1		
Monster Beverage	0.0	0.0	2.23	09/19 09/18	0.55 0.48	14.6 % -14.6 %	1133.6 1016.2	11.6 % -11.6 %	398.6 342.6	16.3 % -16.3 %	35.2 % 33.7 %	1.99 1.69	17.8 % -17.8 %	29.8	66.60	99.4	35.0	30.0	25.0	12.2	2.4	2.7	13.2	45.0	123.8		
United Rentals	0.0	0.0	1.69	09/19 09/18	5.08 4.01	26.7 % -26.7 %	2488.0 2116.0	17.6 % -17.6 %	510.0 460.0	10.9 % -10.9 %	20.5 % 21.7 %	14.51 11.78	23.2 % -23.2 %	8.8	146.27	76.2	14.0	11.5	9.0	15.0	0.6	4.3	22.8	85.0	408.6		
Axos Financial	0.0	0.0	9.96	09/19 09/18	0.66 0.58	13.8 % -13.8 %	122.8 102.8	19.5 % -19.5 %	56.7 49.3	15.0 % -15.0 %	46.1 % 47.9 %	2.57 2.45	4.9 % -4.9 %	9.5	27.96	70.1	16.0	13.5	11.0	15.0	0.6	6.9	24.2	20.0	82.7		
Alibaba Group Holdin	0.0	0.0	7.70	09/19 09/18	3.92 1.12	250.3 % -250.3 %	16968.5 12517.3	35.6 % -35.6 %	12193.2 2537.9	380.4 % -380.4 %	71.9 % 20.3 %	8.39 3.48	141.0 % -141.0 %	21.2	205.47	68.3	37.0	31.0	25.0	15.6	1.4	7.8	25.5	150.0	640.9		
Visa	1.0	0.5	12.12	09/19 09/18	1.34 1.23	8.9 % -8.9 %	6137.0 5434.0	12.9 % -12.9 %	3711.0 3538.0	4.9 % -4.9 %	60.5 % 65.1 %	5.32 3.94	35.0 % -35.0 %	33.0	201.69	117.7	31.0	28.0	25.0	15.0	2.2	2.2	10.9	143.0	331.7		
Signature Bank	1.12	0.8	12.27	09/19 09/18	2.75 2.84	-3.2 % -3.2 %	334.0 329.3	1.4 % -1.4 %	198.5 204.8	-3.0 % -3.0 %	59.4 % 62.2 %	11.05 8.41	31.4 % -31.4 %	11.8	145.01	76.3	21.0	15.5	10.0	11.0	1.1	3.5	17.6	93.0	326.6		
Air Lease	0.43	1.0	5.55	09/19 09/18	1.34 1.32	1.5 % -1.5 %	530.9 450.7	17.8 % -17.8 %	193.8 179.4	8.0 % -8.0 %	36.5 % 39.8 %	4.91 7.58	-35.2 % -35.2 %	8.0	44.35	84.1	12.0	9.5	7.0	13.0	0.6	5.8	18.5	34.4	101.7		
Southwest Airlines	0.70	1.2	4.58	12/19 12/18	0.98 1.17	-16.2 % -16.2 %	5729.0 5704.0	0.4 % -0.4 %	666.0 817.0	-18.5 % -18.5 %	11.6 % 14.3 %	4.28 4.31	-0.7 % -0.7 %	12.3	56.25	98.3	15.0	12.5	10.0	7.0	1.8	2.4	10.9	42.0	90.0		
TJX Companies	0.74	1.2	2.84	10/19 10/18	0.68 0.61	11.5 % -11.5 %	10451.3 9825.8	6.4 % -6.4 %	1122.1 1046.5	7.2 % -7.2 %	10.7 % 10.7 %	2.55 2.45	4.3 % -4.3 %	21.4	60.93	104.5	24.0	20.5	17.0	11.5	1.9	2.3	11.7	43.4	100.6		
Tractor Supply	1.20	1.3	5.08	09/19 09/18	1.02 0.95	7.4 % -7.4 %	1984.1 1881.6	5.4 % -5.4 %	156.9 148.7	5.5 % -5.5 %	7.9 % 7.9 %	4.56 4.08	11.8 % -11.8 %	18.5	93.99	86.1	25.0	21.5	18.0	11.3	1.6	4.2	16.5	70.0	194.7		

Figure 56 - PERT sorted by Yield

Add the median EPS Growth with the median Dividend Yield, 11.0% + 1.0% = 12.0%, for our estimated portfolio growth rate.

DIVERSIFICATION (cont.)

PORTFOLIO REVIEW		
A. Diversification = risk & reward mitigation	Goal	
1. Percentage by Size (% Small [Fast]/% Medium/%Large [Slow])	25%/50%/25%	4.4%/69.0%/26.6%
2. %Estimated Portfolio Growth Rate = %Est EPS + %Yield	~10%	11.0% + 1.0% = 12.0%

Figure 57 - Growth diversification with Est. Portfolio Growth Rate

The estimated portfolio growth rate of 12% coupled with only 4.4% faster (small) companies suggests we have some medium or larger companies growing faster than their size would imply, keeping our portfolio growth rate at an acceptable rate of growth.

Larger companies growing at faster than normal rates are not uncommon with quality-growth companies, but they represent an increased risk. Those companies will need to continuously outperform their peers which is desired but not always sustainable. Fortunately, the Quality section of the Review form will flag any company when its growth falters.

Common Misconception: Growth vs. Return. Be careful not to confuse portfolio growth rate with portfolio total return (price appreciation + dividend yield). Achieving a 15% total return (price appreciation + dividend yield) for a company growing earnings at 10% requires you to buy the company far enough below the average P/E (at or near the estimated low P/E, buy low) and sell the company far enough above the average P/E (at or near the estimated high P/E, sell high) to achieve a return of 15% or more. The SSG Section 5 gives you those measures.

Sector diversification limits the influence of a single sector to 30% or about 1/3 of the portfolio.

PORTFOLIO REVIEW		
A. Diversification = risk & reward mitigation	Goal	
1. Percentage by Size (% Small [Fast]/% Medium/%Large [Slow])	25%/50%/25%	4.4%/69.0%/26.6%
2. %Estimated Portfolio Growth Rate = %Est EPS + %Yield	~10%	11.0% + 1.0% = 12.0%
3. Number & Percent of Sectors (#/Largest Sector @ %)	Sector<30%	

Figure 58- A3. Sector Diversification

Do not try to keep sectors equal in value. As the market cycle ebbs and flows certain sectors tend to dominate. Watch which sectors are improving and declining each month to help you understand where buys and sells will most likely be found.

DIVERSIFICATION (cont.)

value. Don't buy or sell companies to balance values if the company valuation doesn't support buying or selling.

The number of companies you own in your portfolio is strongly influenced by the number of partners in your club, their level of experience, and number of companies partners are willing/able to consistently track. The goal is to own only enough companies that your partnership can effectively track company performance.

Studies have measured the volatility of portfolios compared to the market and concluded that portfolios with 15-25 stocks will optimize volatility. Portfolios with fewer than 10 companies will be more volatile than the market. Portfolios with more than 30 stocks will not experience less volatility than the market.

Think of cash as another holding. Since cash has a growth rate of zero, we like to keep cash to a minimum, commonly around 5%. There are reasons to increase your cash position. A retired investor living off their investment income may wish to keep one or two years of cash to provide a buffer against the next bear market. Beware of too much cash. The impact on the portfolio growth rate can be profound. 50% cash would require returns of 30% to provide a 15% portfolio return. Try to avoid tools that provide diversification measures but exclude cash.

Improving your portfolio is accomplished slowly. Improving any diversification measure improves your portfolio.

The Summary Report or Valuation Statement is used to finish the final two parts of the Diversification section of the Portfolio Report.

Show All entries						
Portfolio Total Value					\$49,334.23	
Ticker	Company	Price Date	Price	Shares	Total Value	% of Portfolio
\$CASH	\$CASH	1/28/2020	--	--	1,303.36	2.6
AL	Air Lease	1/27/2020	44.35	92.4	4,096.03	8.3
BABA	Alibaba Group Holdin	1/27/2020	205.47	11.5	2,357.73	4.8
AMGN	Amgen	1/27/2020	222.95	4.7	1,057.50	2.1
AX	Axos Financial	1/27/2020	27.96	0.0	0.00	0.0
OZK	Bank OZK	1/27/2020	27.59	77.1	2,127.22	4.3
STZ	Constellation Brands	1/27/2020	190.90	8.6	1,640.59	3.3
CVS	CVS Health	1/27/2020	70.97	33.4	2,372.30	4.8
MNST	Monster Beverage	1/27/2020	66.60	26.7	1,774.90	3.6
SBNY	Signature Bank	1/27/2020	145.01	33.4	4,849.06	9.8
SWKS	Skyworks Solutions	1/27/2020	116.88	24.0	2,803.26	5.7
LUV	Southwest Airlines	1/27/2020	56.25	11.4	641.56	1.3
TJX	TJX Companies	1/27/2020	60.93	57.2	3,482.56	7.1
TSCO	Tractor Supply	1/27/2020	93.99	57.2	5,372.17	10.9
ULTA	Ulta Beauty	1/27/2020	273.70	21.8	5,957.08	12.1
URI	United Rentals	1/27/2020	146.27	45.4	6,644.07	13.5
V	Visa	1/27/2020	201.69	14.2	2,854.84	5.8

Showing 1 to 17 of 17 entries

Figure 61 - Summary Report

DIVERSIFICATION (cont.)

PORTFOLIO REVIEW		
A. Diversification = risk & reward mitigation	Goal	
1. Percentage by Size (% Small [Fast]/% Medium/%Large [Slow])	25%/50%/25%	4.4%/69.0%/26.6%
2. %Estimated Portfolio Growth Rate = %Est EPS + %Yield	~10%	11.0% + 1.0% = 12.0%
3. Number & Percent of Sectors (#/Largest Sector @ %)	Sector<30%	6/Consumer Cyclical 34.8%
4. Number & Percent of Stocks (#/Largest Stock @ %)	15-25/Stock<20%	17/URI @ 13.5%
5. Percent Cash	~5%	2.6%

Figure 62 – Portfolio Review Diversification section completed

With 17 positions (16 stocks & cash) the portfolio's volatility is comparable to the market. Portfolio volatility is optimized between 15 and 30 positions.

United Rental (URI) is 34.8% of the portfolio. The recommended maximum for a single position is 20%. This adds risk that a downturn (or upturn) in this one company would have a disproportionate impact on the portfolio.

Cash is 2.6% of the portfolio suggesting an appropriate impact with zero percent growth.

Opportunities to improve portfolio diversification

Each section of the Portfolio Review is designed to identify opportunities to improve your portfolio. Not all opportunities are expected to be acted upon. Often some will be conflicting. Replace the form instructions in the grey area at the end of Section A with a list of opportunities to improve the portfolio's diversification.

PORTFOLIO REVIEW		
A. Diversification = risk & reward mitigation	Goal	
1. Percentage by Size (% Small [Fast]/% Medium/%Large [Slow])	25%/50%/25%	4.4%/69.0%/26.6%
2. %Estimated Portfolio Growth Rate = %Est EPS + %Yield	~10%	11.0% + 1.0% = 12.0%
3. Number & Percent of Sectors (#/Largest Sector @ %)	Sector<30%	6/Consumer Cyclical 34.8%
4. Number & Percent of Stocks (#/Largest Stock @ %)	15-25/Stock<20%	17/URI @ 13.5%
5. Percent Cash	~5%	2.6%
Opportunities to improve the portfolio diversification: <ul style="list-style-type: none"> • Increase small size while reducing medium. • Avoid/reduce consumer cyclical 		

The goal of this methodology is to improve your portfolio with each buy and sell. The Portfolio Review is used to identify justifiable opportunities (buy and sell actions) that achieve that goal.

Guided Practice

1. What are the two goals of diversity?
Balance portfolio risk and reward (growth).
2. How is risk balanced?
Risk is balanced by limiting the value in any one sector and company while holding a minimum of companies. Recommended guidelines include 30% maximum for any one sector; 20% for one company; and holding 15-25 companies to stabilize portfolio volatility; and 5% or less for cash.
3. How is growth balanced?
Growth is balanced with company size and estimated future growth by owning about 25%

DIVERSIFICATION (cont.)

smaller fast-growth companies (12%+ growth); 25% larger slow-growth companies (7% or less); and 50% medium-growth companies (7%-12% growth).

4. What is the desired portfolio growth rate?

The same or slightly better than the historical market growth rate about 10%; EPS growth plus dividend yield.

5. How does a portfolio growth rate of approximately 10% allow a return of 15% or better?

We expect 15% price appreciation is the result of earnings growth plus P/E expansion which is achieved by buying companies at the bottom of their business cycle (low P/E) and selling at or near the top of their business cycle (high P/E). Without P/E expansion you should expect a return equal to your growth rate (explained in Chapter 4 – Valuation).

Independent Practice

1. What would you recommend to improve the diversification of the sample portfolio below?

		Portfolio Total Value						Portfolio dollar-weighted average				US/DS: 6.4		%Total Return: 11.6	
Ticker	Company	Price Date	Price	Shares	Total Value	% of Portfolio	Current PE	Buy Below	Sell Above	US/DS	% Tot Ret				
SCASH	SCASH	10/16/2019	--	--	5,162.57	7.0	--	--	--	--	--	--	--	--	--
AMZN	Amazon.com	10/15/2019	1767.38	2.0	3,534.76	4.8	73.3	2380.40	3911.80	19.1	21.5				
AAPL	Apple	10/15/2019	235.32	97.0	22,826.04	31.1	20.1	204.20	260.60	0.9	5.8				
CHD	Church & Dwight Co	10/15/2019	72.80	50.0	3,640.00	5.0	30.3	62.90	83.20	1.0	6.6				
CTSH	Cognizant Tech Solns	10/15/2019	61.34	50.0	3,067.00	4.2	17.0	85.70	137.10	75.7	22.2				
FB	Facebook	10/15/2019	188.89	25.0	4,722.25	6.4	32.0	109.60	306.50	1.2	16.5				
HEI	Heico	10/15/2019	122.78	12.0	1,473.36	2.0	54.1	89.10	147.40	0.9	7.7				
SWKS	Skyworks Solutions	10/15/2019	86.64	121.0	10,483.44	14.3	16.5	97.00	171.00	4.6	19.9				
UNH	UnitedHealth Group	10/15/2019	238.59	10.0	2,385.90	3.3	17.9	282.40	427.30	9.1	16.7				
V	Visa	10/15/2019	178.75	90.0	16,087.50	21.9	34.3	188.50	279.40	4.1	13.2				

Figure 63- Sample Portfolio

More on next page ...

DIVERSIFICATION (cont.)

Sector	Industry	Security	Market Value (Security)	% of Portfolio (Security)	% of Portfolio (Industry)	% of Portfolio (Sector)
SCASH						
	SCASH				7.0%	7.0%
Consumer Cyclical		SCASH	\$5,162.57	7.0%		4.8%
	Specialty Retail				4.8%	
		Amazon.com	\$3,534.76	4.8%		
Consumer Defensive						5.0%
	Household & Personal Products					5.0%
		Church & Dwight Co	\$3,640.00	5.0%		
Financial Services						21.9%
	Credit Services				21.9%	
		Visa	\$16,087.50	21.9%		
Healthcare						3.3%
	Health Care Plans					3.3%
		UnitedHealth Group	\$2,385.90	3.3%		
Industrials						2.0%
	Aerospace & Defense					2.0%
		Heico	\$1,473.36	2.0%		
Technology						56.0%
	Consumer Electronics				31.1%	
		Apple	\$22,826.04	31.1%		
	Information Technology Services				4.2%	
		Cognizant Tech Solns	\$3,066.75	4.2%		
	Internet Content & Information				6.4%	
		Facebook	\$4,722.25	6.4%		
	Semiconductors				14.3%	
		Skyworks Solutions	\$10,483.44	14.3%		
Total			\$73,382.57			100.0%

Company Name	Div	Yield	Est EPS Nxt 12 Mo	EPS		Sales		Pre-Tax Profit		TTM EPS		Proj PE	Price	Proj RV	Proj 5Yr P/E Ratios			Est EPS Growth	PEG Ratio	U/D Ratio	% Total Return	
				Qtr End	% Chg	Mill \$	% Chg	Mill \$	% Chg	Sales	% Chg				Hi	Avg	Low					
Church & Dwight Co	0.87	1.2	2.56	06/19 06/18	0.55 0.49	12.2 % 1027.9	1079.4 5.0 %	170.3 155.4	9.6 %	15.8 % 15.1 %	2.40 2.16	11.1 %	28.4	72.80	113.6	28.0	25.0	22.0	6.8	4.2	1.0	6.6
Skyworks Solutions	1.34	1.5	5.71	06/19 06/18	0.83 1.57	-47.1 % 894.3	767.0 -14.2 %	161.9 310.8	-47.9 %	21.1 % 34.8 %	5.24 6.45	-18.8 %	15.2	86.64	76.2	25.8	19.9	14.0	9.0	1.7	4.6	19.9
Apple	2.72	1.2	12.79	06/19 06/18	2.18 2.34	-6.8 % 53265.0	53809.0 1.0 %	11911.0 13284.0	-10.3 %	22.1 % 24.9 %	11.73 11.03	6.3 %	18.4	235.32	131.5	16.0	14.0	12.0	9.0	2.0	0.9	5.8
Cognizant Tech Solns	0.80	1.3	3.97	06/19 06/18	0.90 0.78	15.4 % 4006.0	4141.0 3.4 %	676.0 623.0	8.5 %	16.3 % 15.6 %	3.61 2.47	46.2 %	15.4	61.34	64.4	28.0	24.0	20.0	10.0	1.5	75.7	22.2
UnitedHealth Group	3.45	1.4	14.71	06/19 06/18	3.42 2.98	14.8 % 55731.0	60013.0 7.7 %	4326.0 3860.0	12.1 %	7.2 % 6.9 %	13.32 12.01	10.9 %	16.2	238.59	75.5	25.0	21.5	18.0	10.4	1.6	9.1	16.7
Visa	0.83	0.5	5.99	06/19 06/18	1.37 1.00	37.0 % 5240.0	5840.0 11.5 %	3866.0 2812.0	37.5 %	66.2 % 53.7 %	5.21 3.61	44.3 %	29.8	178.75	106.5	31.0	28.0	25.0	15.0	2.0	4.1	13.2
Facebook	0.00	0.0	6.96	06/19 06/18	0.91 1.74	-47.7 % 13231.0	16886.0 27.6 %	4832.0 5868.0	-17.7 %	28.6 % 44.4 %	5.90 6.46	-8.7 %	27.1	188.89	111.2	30.0	24.4	18.8	18.0	1.5	1.2	16.5
Heico	0.12	0.1	2.68	07/19 07/18	0.59 0.49	20.4 % 465.8	532.3 14.3 %	114.2 96.1	18.8 %	21.4 % 20.6 %	2.27 1.72	32.2 %	45.8	122.78	163.7	34.0	28.0	22.0	18.0	2.5	0.9	7.7
Amazon.com	0.00	0.0	28.92	06/19 06/18	5.22 5.07	3.0 % 52886.0	63404.0 19.9 %	2889.0 2605.0	10.9 %	4.6 % 4.9 %	24.10 12.61	91.1 %	61.1	1767.38	84.3	78.0	72.5	67.0	20.0	3.1	19.1	21.5

Sectors: Maintain? Increase? Reduce? Avoid?

Growth Rate (red circles are median values): Maintain? Increase? Reduce? Avoid?

of Companies: Maintain? Increase? Reduce? Avoid?

Company's % of Portfolio: Maintain? Increase? Reduce? Avoid?

Cash % of Portfolio: Maintain? Increase? Reduce?

DIVERSIFICATION (cont.)

Independent Practice Answers

1. What would you recommend to improve the diversity of the sample portfolio?

Sectors: Reduce technology (56%) to 30% or less.

Growth Rate: Maintain current growth of 11.6% (10.4% + 1.2%)

of Companies: Consider increasing current number of 9 positions up to 15.

Company's % of Portfolio: Consider reducing Apple from 31.1% to less than 20%. Avoid more Visa.

No adjustment to cash needed; maintain about 5%.

Chapter 11 QUALITY

Goal

Use the knowledge, skills and resources needed to monitor and manage the quality of a portfolio.

Objectives

- Explain how to monitor quality-growth companies to ensure their continued quality status.
- Use the PERT to identify companies that are not achieving your estimated earnings growth.
- Use a company's annual report MD&A to determine their strategic growth plan.
- Use a price chart with volume to identify dates of significant price movements.
- Use news reports to identify the cause of events resulting in noticeable price movement.

Concepts

- High-quality Growth Company
- Business Cycle
- Strategic Growth Plan

Tools/Resources

- Portfolio Evaluation Review Technique (PERT)
- Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A)
- www.SEC.gov
- www.BigCharts.com

Instruction Background

High-quality growth companies are the core of a BI concentrated portfolio. Each company purchased is expected to meet our criteria of high-quality growth, as defined in *SSG Magic*. Once a company is purchased it becomes necessary to monitor the quality of each company owned. The tool provided by BI designed to quickly perform this task is the Portfolio Evaluation Review Technique (PERT). At the core of our definition of a high-quality growth company is the understanding that sales drives earnings and earnings drives price. Earnings growth is the measurement to which we anchor our methodology. Our methodology requires us to estimate future 5-year average earnings growth and base our valuation calculations on the company achieving those earnings. Therefore, our first and most important ongoing measure is comparing actual EPS growth to our estimated EPS growth rate.

Monitoring quality focuses on actual earnings growth versus estimated earnings growth. The PERT provides both quarterly and trailing-twelve-month (TTM) percent growth results. If a company is missing our estimated growth rate, we need to pay attention. Missing for a single quarter is not unusual for many companies. However, missing for an entire year (TTM) is a problem that requires research. The PERT highlights companies missing the SSG's estimated earnings by coloring the cell magenta. The Portfolio Review, Figure 64, lists each company missing EPS estimates as identified in the PERT. Figure 65 below shows the sample PERT with 8 companies with actual TTM EPS less than the estimated EPS growth.

B. Quality = consistent & predictable growth	
1. Growth Estimates – PERT	
a. TTM EPS - Missed estimates	AL, AX, OZK, STZ, SWKS, LUV, TJX, ULTA

Figure 64 - Portfolio Review with missed EPS estimates

QUALITY (cont.)

Report Options		Summary		PERT		Classification																				
Report Details		Show All		Print		Search																				
Company Name	Div	Yield	Est EPS 12 Mo	EPS			Sales			Pre-Tax Profit			TTM EPS		Proj PE	Price	Proj RV	Proj Yr P/E Ratios			Est EPS Growth	Div Payout	UID Ratio	% Total Return	Est 5 Years	
				Qtr End	\$	% Chg	Mill \$	% Chg	Mill \$	% Chg	\$	% Chg	Hi	Avg				Low	Low Price	High Price						
Air Lease	0.43	1.0	5.55	09/19 09/18	1.34 1.32	1.5 %	530.9 450.7	17.8 %	193.8 179.4	8.0 %	36.5 39.8	4.9 %	-35.2 %	8.0	44.35	1/27/2020	84.1	12.0	9.5	7.1	13.0	0.6	5.8	18.5	34.4	101.7
Alibaba Group Holdin	0.00	0.0	9.70	09/19 09/18	3.92 1.12	250.3 %	16968.5 12517.3	35.6 %	12193.2 2337.9	380.4 %	71.9 29.3	8.39 3.48	141.0 %	21.2	205.47	1/27/2020	68.3	37.0	31.0	25.1	15.6	1.4	7.8	25.5	150.0	640.9
Amgen	5.28	2.4	13.68	09/19 09/18	3.27 2.86	14.3 %	5737.0 5904.0	-2.8 %	2277.0 2094.0	8.7 %	39.7 35.5	13.03 12.12	7.5 %	16.3	222.95	1/27/2020	88.1	22.0	18.5	15.1	5.0	3.3	2.0	12.0	152.0	365.9
Axos Financial	0.00	0.0	2.96	09/19 09/18	0.66 0.58	13.6 %	122.8 102.8	19.5 %	56.7 49.3	15.0 %	46.1 47.9	2.5 2.4	4.9 %	9.5	27.96	1/27/2020	70.1	16.0	13.5	11.1	15.0	0.6	6.9	24.2	20.0	82.7
Bank OZK	0.80	2.9	3.59	09/19 09/18	0.81 0.58	39.7 %	243.6 242.6	0.4 %	136.5 99.8	36.7 %	56.0 41.2	3.4 3.4	-2.0 %	7.7	27.59	1/27/2020	61.4	15.0	12.5	10.1	5.1	1.5	5.0	20.8	20.0	65.8
Constellation Brands	2.96	1.6	4.52	11/19 11/18	1.85 1.56	18.6 %	1999.4 1972.6	1.4 %	-292.4 347.4	-184.2 %	-14.6 17.6	4.1 13.3	-68.9 %	42.2	190.90	1/27/2020	228.1	22.0	18.5	15.1	9.0	4.7	8.4	24.0	150.0	534.0
CVS Health	2.00	2.8	6.48	09/19 09/18	1.17 1.36	-14.0 %	64547.0 47289.0	36.6 %	21330.0 1899.0	12.3 %	3.3 4.0	5.89 1.56	277.6 %	11.0	70.97	1/27/2020	59.2	22.0	18.5	15.1	10.0	1.1	3.8	25.3	35.0	208.7
Monster Beverage	0.00	0.0	2.23	09/19 09/18	0.55 0.48	14.6 %	1133.6 1916.2	11.8 %	398.6 342.6	16.3 %	35.2 33.7	1.99 1.09	31.4 %	11.8	145.01	1/27/2020	76.3	21.0	15.5	10.1	11.0	1.1	3.5	17.6	93.0	326.6
Signature Bank	1.12	0.8	12.27	09/19 09/18	2.75 2.84	-3.2 %	334.0 329.3	1.4 %	198.5 204.8	-3.0 %	59.4 62.2	11.05 8.41	-23.5 %	22.4	116.88	1/27/2020	102.0	30.0	22.0	14.1	9.0	2.5	1.8	14.2	60.0	220.6
Skyworks Solutions	1.58	1.4	5.21	12/19 12/18	1.50 1.60	-6.3 %	896.1 972.0	-7.8 %	278.7 323.8	-13.9 %	31.1 33.3	4.75 6.25	-23.5 %	12.3	56.25	1/27/2020	98.3	15.0	12.5	10.1	7.0	1.8	2.4	10.9	42.0	90.0
Southwest Airlines	0.70	1.2	4.58	12/19 12/18	0.98 1.17	-16.2 %	5729.0 5704.0	0.4 %	666.0 817.0	-18.5 %	11.6 14.3	4.28 4.31	-0.7 %	21.4	60.93	1/27/2020	104.5	24.0	20.5	17.1	11.5	1.9	2.3	11.7	43.4	100.6
TJX Companies	0.74	1.2	2.84	10/19 10/18	0.68 0.61	11.5 %	10451.3 9825.8	6.4 %	1122.1 1042.5	7.2 %	10.7 10.7	2.55 2.41	4.3 %	21.4	93.99	1/27/2020	104.5	24.0	20.5	17.1	11.5	1.9	2.3	11.7	43.4	100.6
Tractor Supply	1.20	1.3	5.08	09/19 09/18	1.02 0.95	7.4 %	1984.1 1881.6	5.4 %	156.9 148.7	5.5 %	7.9 7.9	4.56 4.08	11.8 %	18.5	273.70	1/27/2020	86.1	25.0	21.5	18.1	11.3	1.6	4.2	16.5	70.0	194.7
Ulta Beauty	0.00	0.0	13.16	10/19 10/18	2.25 2.18	3.2 %	1682.5 1560.0	7.9 %	168.7 170.5	-1.1 %	10.0 10.9	11.86 10.74	10.4 %	20.8	146.27	1/27/2020	76.2	14.0	11.5	9.1	11.0	1.9	3.5	20.0	155.6	682.1
United Rentals	0.00	0.0	16.69	09/19 09/18	5.08 4.01	26.7 %	2488.0 2116.0	17.6 %	510.0 460.0	10.9 %	20.5 21.7	14.51 11.78	23.2 %	8.8	201.68	1/27/2020	76.2	14.0	11.5	9.1	15.0	0.6	4.3	22.8	85.0	408.6

Figure 65 - PERT TTM EPS

We assume the growth plan is being achieved when actual EPS meets or exceeds our estimated EPS.

When missing EPS estimates we must decide if the problem is temporary or longer-term.

Understanding a company's normal business cycle is required to evaluate potential problems before we can assess any threat to the company's ability to achieve its strategic growth plans.

The Business Cycle is the combined result of a company's product life cycles. Growth companies must constantly add or improve their products on a regular schedule. Each product begins its life as a "startup" and if successfully introduced begins an explosive phase of growth. Over time that product's growth slows and ideally is replaced by the company with a new and improved version which begins the cycle anew.

This process of constant product renewal creates a pattern known as the business cycle. The cycle tends to be at its bottom as a flagship product is losing market share and customers are waiting for its replacement. Once the product is replaced and is obviously doing well, investor enthusiasm drives company prices up until the market again sees signs of slowing growth.

Normal business sees lower growth and company prices at the bottom of the cycle and higher growth and prices at the top of the cycle. Your task is recognizing when downturns are the result of a failing product or simply a temporary problem fixable by management during the current business cycle.

If the problem seems to be temporary and fixable you may want to consider adjusting the company's estimated growth rate to reflect the concern and need for recovery time. This type of adjustment effectively reflects the attitude that price appreciation, as reflected in Total Return, will not be as robust as originally expected for this business cycle. The reduction of the potential total return will make that company less desirable to buy and more susceptible to moving its funds to a company with higher potential return.

QUALITY (cont.)

Researching quality problems is a skill refined over time but there are certain steps you can take that will assist your research.

- (1) Read the "Management's Discussion and Analysis of Financial Condition and Results of Operations" (MD&A) section of the company's annual report to verify the company's strategic growth plan. All annual reports are filed at www.sec.gov. After reading the MD&A, if you don't understand their growth plan you may want to reevaluate if this company is appropriate for your portfolio. For example, Enron's last few annual reports include so much double-speak as to be un-intelligible.
- (2) Review the company's price chart. Has the price made a sudden movement up or down recently with more than average volume? Note the date of the more recent moves.
- (3) Review the news on the dates immediately following large price moves. The reasons for those moves will normally be detailed. Decide if those reasons will interfere with the company's strategic growth plans as outlined in the MD&A.
- (4) Use BigCharts.com to review a 5-year chart of price movement, TTM P/E, rolling EPS. Does the P/E cycle correspond with your estimation of high and low P/E's? Do you see any EPS movements that you don't already understand? For example:



Figure 66- BigCharts.com (AAPL)

Based on your research, revisit your SSG and determine if any judgments need to be updated to reflect your findings.

As a routine, have each company watcher be ready to report on a company any month it has missed its TTM EPS earnings estimates and explain why the company should retain the "quality" rating, or if not, why the company should be sold immediately. If recommending the company retains its quality rating, then recommend judgments that may need adjusting based on their findings. Since the situation will often remain static for months, it can be useful to publish research results and decisions in a monthly portfolio review, so a quick review can remind partners of the company's situation and your analysis.

QUALITY (cont.)

Reporting quality results in the portfolio review needs to be brief and concise. Focus on answering the question, “Does this problem impact a company’s ability to achieve their strategic growth plan?” Consider reporting how much estimates were missed; if you believe the problem is temporary or not; key news that explains the problem; any judgment adjustments; your evaluation of the business cycle and estimate for the next top/bottom; your recommendations moving forward. Feel free to include information about companies that have achieved earnings but still have key information to report.

Opportunities to improve the portfolio quality.

From the quality review look for opportunities resulting from sector issues, changing fundamentals and stock prices out of sync with fundamentals. If a stock no longer qualifies as a *quality stock*, replace it. The sample portfolio shows the following opportunities for consideration.

B. Quality = consistent & predictable growth	
1. Growth Estimates – PERT	
a. TTM EPS - Missed estimates	AL, AX, OZK, STZ, SWKS, LUV, TJX, ULTA
<p>Opportunities to improve the portfolio quality:</p> <ul style="list-style-type: none"> • AL (-35% vs 13%) Temporary downturn due to 737-max. AIRR = 9.4% (see Jan/Feb 2020 BI page 44 – First Cut). Undervalued. • OZK (-2% vs 5%) – BANK. Fed reducing interest rates. Consider replacing OZK with a non-bank/higher growth small stock. • STZ (-69% vs 9%) Temporary recovery due to premium price for Canadian cannabis. AIRR=8.8%. VL est EPS = 8.5%. TTM EPS = -69%. TTM Sales = 2%. Long term looks good. Short term poor. Replace for 2020? • SWKS (-24% vs. 9%) Revenue guidance has dropped due to tariffs and Huawei ban. Stock is currently undervalued. SSG EPS dropped to 6% until temporary tariffs and ban are resolved. Quality remains despite high volatility. • TJX (4% vs 11.5%) – AIRR =40.5%. Sell for profit?? Est hi PE=24. Current PE = 24.6. Proj PE=21.4. Increase est. hi PE? See www.bigcharts.com • ULTA (10.4% vs. 11%) – close enough – normal business. 	

Figure 67 – Missed TTM EPS Estimates with quality improvement opportunities

Guided Practice

1. Where do we find a company’s strategic growth plan?

In the Management’s Discussion and Analysis of Financial Condition and Results of Operations (MD&A) section of the company’s annual report 10-K filed with the SEC. Typically, we’ll also find elements repeated in analysts’ comments.

2. What is our assumption if a company has achieved or exceeded our estimated TTM EPS growth?

We assume the company is achieving its strategic growth plan and will eventually realize a peak in its business cycle as usual.

3. What is our assumption if a company has missed our estimated TTM EPS growth?

We assume something has changed regarding the company’s financials that may impede or stop the company from achieving its strategic growth plan.

4. What action do we take when a company has missed our growth estimates?

We use price charts with volume to identify unusually large daily losses to pin down the date an event occurred. News near that date will discuss the cause of the problem. Decide if the problem requires an adjustment to the growth rate, or, if the company is in jeopardy of

QUALITY (cont.)

achieving their strategic growth plan, consider selling the company and replacing it with a different quality-growth company.

5. What is the impact of reducing a company's growth estimate on the SSG and PERT?

When we reduce the estimated growth the SSG recalculates and lowers the estimated high price in section 4 which lowers the potential total return in section 5. If the PERT is sorted on potential total return the newly calculated return will lower the company's position on the PERT potentially suggesting sell or replacement with a higher potential company.

6. What type of changes and opportunities are we looking for in the quality review?

Changes in fundamentals that suggest a company's long-term growth is decreasing and their strategic growth plan is at risk. Opportunities to reduce risk may result in selling a company having a bad business cycle (year) to avoid loss or further loss; or, purchase more stock of a company showing reduced fundamentals and price due to temporary issues (often political) that creates temporary opportunities.

Independent Practice

1. Which of the following companies have missed your EPS growth estimate? What is their actual versus estimate? (Note this PERT is sorted high to low by %Total Return.)

DIV	COMPANY	% YLD	EST EPS		EPS		SALES		PRE-TAX PROFIT			T/M EPS		PROJ P/E	PRICE	PROJ RV	PROJ 5 YR P/E RATIOS			EST EPS GROWTH	PEG RATIO	UID RATIO	% TOTAL RETURN	EST FIVE YEARS	
			NXT 12 MO	QTR END	\$	% CHG	MILL \$	% CHG	MILL \$	% CHG	% SALES	\$	% CHG				HI	AVG	LOW					LOW PRICE	HIGH PRICE
0.00	Biogen Ide c	0.0	17.56 18.96	03/16 03/15	4.43 3.49	2,726.8 2,555.0	6.7%	26.8%	1,337.6 1,110.7	49.1% 43.5%	20.4%	16.28 13.86	17.5%	14.6	277.26 05/25/16	65.0	30.0 22.5	15.0	7.9	1.9	10.4	20.8	229.7	770.7	
0.60	AmTrust Fi nancial Se rvs	2.3	2.76 3.14	03/16 03/15	0.56 0.93	1,275.9 1,112.5	6.7%	-39.1%	253.5 308.6	19.9% 27.7%	-17.8%	2.44 3.03	-19.2%	8.4	26.23 05/25/16	79.6	12.0 10.5	9.0	13.0	0.6	7.1	19.9	21.3	61.4	
1.20	FASTENAL C O	2.6	1.93 1.86	03/16 03/15	0.44 0.43	986.7 953.3	1.4%	3.5%	199.9 203.5	20.3% 21.3%	-1.8%	1.77 1.72	3.3%	24.7	45.90 05/25/16	89.7	35.0 27.5	20.0	8.8	2.8	4.3	17.9	35.4	91.2	
0.00	COGNIZANT TECH SOLUT IONS	0.0	3.13 3.11	03/16 03/15	0.72 0.62	3,202.0 2,911.4	10.0%	15.5%	589.1 510.6	18.4% 17.5%	15.4%	2.74 2.41	14.1%	20.2	62.80 05/25/16	101.0	25.0 20.0	15.0	14.0	1.4	2.8	16.0	38.3	131.3	
1.80	Costco	1.2	5.67 5.61	02/16 02/15	1.24 1.35	28,170.0 27,454.0	-8.4%	2.6%	841.0 870.0	3.0% 3.2%	-3.3%	5.22 5.12	2.0%	25.7	144.07 05/25/16	95.1	30.0 27.0	24.0	8.6	3.0	5.6	11.3	127.9	234.1	

2. What is Fastenal's strategic growth plan? What changed with Q1 results?

Summary of 2015 10-K	Summary of 2016 Q1 10-Q
<ol style="list-style-type: none"> Continue adding people to stores. 1668 added in 2015 (up 13.6%) Expand store openings. Goal is to increase (open) 60-75 (2-3%) in 2016. Increase national accounts and onsite customers, YOY. Convert 800 stores to Customer Service Project (CSP) format in 2016 which expands inventory placement to enhance same-day capabilities. 	<ol style="list-style-type: none"> Store employee count has dropped by 303 since the end of December 2015. 17 new stores opened but closed 12 due to "not meaningful" impact to sales. 50 new national accounts. Expanding vs. contracting accounts improved slightly from 49 to 51 to 53 to 47. The norm is 3 to 1. 185 stores have been converted to the CSP format.

QUALITY (cont.)

3. If we decided that Fastenal was more likely to only grow at 1% for the next few years how would that adjustment change the PERT?

DIV	COMPANY	% YLD	EST EPS NXT 12 MO	EPS			SALES		PRE-TAX PROFIT			T/M EPS		PROJ P/E	PRICE	PROJ RV	PROJ 5 YR P/E RATIOS			EST EPS GROWTH	PEG RATIO	U/D RATIO	% TOTAL RETURN	EST FIVE YEARS	
				QTR END	\$	% CHG	MILL \$	% CHG	MILL \$	% CHG	% SALES	\$	% CHG				HI	AVG	LOW					LOW PRICE	HIGH PRICE
0.00	Biogen Ide c	0.0	17.56 18.96	03/16 4.43 03/15 3.49	2,726.8 2,555.0	26.8%	6.7%	1,337.6 1,110.7	49.1% 43.5%	16.28 13.86	17.5%	14.6	277.26 05/25/16	65.0	30.0 22.5	15.0	7.9	1.9	10.4	20.8	229.7	770.7			
0.60	AmTrust Financial Services	2.3	2.76 3.14	03/16 0.56 03/15 0.93	1,275.9 1,112.5	26.8%	14.7%	253.5 308.6	19.9% 27.7%	2.44 3.03	-19.2%	8.4	26.23 05/25/16	79.6	12.0 10.5	9.0	13.0	0.6	7.1	19.9	21.3	61.4			
0.00	COGNIZANT TECH SOLUTIONS	0.0	3.13 3.11	03/16 0.72 03/15 0.62	3,202.0 2,911.4	15.5%	10.0%	589.1 510.6	18.4% 17.5%	2.74 2.41	14.1%	20.2	62.80 05/25/16	101.0	25.0 20.0	15.0	14.0	1.4	2.8	16.0	38.3	131.3			
1.80	Costco	1.2	5.67 5.61	02/16 1.24 02/15 1.35	28,170.0 27,454.0	-8.4%	2.6%	841.0 870.0	3.0% 3.2%	5.22 5.12	2.0%	25.7	144.07 05/25/16	95.1	30.0 27.0	24.0	8.6	3.0	5.6	11.3	127.9	234.1			
1.20	FASTENAL CO	2.6	1.79 1.86	03/16 0.44 03/15 0.43	986.7 953.3	1.4%	3.5%	199.9 203.5	20.3% 21.3%	1.77 1.72	3.3%	24.7	45.90 05/25/16	89.7	35.0 27.5	20.0	1.0	24.7	2.1	9.7	35.4	67.7			

Independent Practice Answers

1. Which of the following companies have missed your EPS growth estimate? What is their actual versus estimate? (Note this PERT is sorted high to low by %Total Return.)

DIV	COMPANY	% YLD	EST EPS NXT 12 MO	EPS			SALES		PRE-TAX PROFIT			T/M EPS		PROJ P/E	PRICE	PROJ RV	PROJ 5 YR P/E RATIOS			EST EPS GROWTH	PEG RATIO	U/D RATIO	% TOTAL RETURN	EST FIVE YEARS	
				QTR END	\$	% CHG	MILL \$	% CHG	MILL \$	% CHG	% SALES	\$	% CHG				HI	AVG	LOW					LOW PRICE	HIGH PRICE
0.00	Biogen Ide c	0.0	17.56 18.96	03/16 4.43 03/15 3.49	2,726.8 2,555.0	26.8%	6.7%	1,337.6 1,110.7	49.1% 43.5%	16.28 13.86	17.5%	14.6	277.26 05/25/16	65.0	30.0 22.5	15.0	7.9	1.9	10.4	20.8	229.7	770.7			
0.60	AmTrust Financial Services	2.3	2.76 3.14	03/16 0.56 03/15 0.93	1,275.9 1,112.5	26.8%	14.7%	253.5 308.6	19.9% 27.7%	2.44 3.03	-19.2%	8.4	26.23 05/25/16	79.6	12.0 10.5	9.0	13.0	0.6	7.1	19.9	21.3	61.4			
1.20	FASTENAL CO	2.6	1.79 1.86	03/16 0.44 03/15 0.43	986.7 953.3	1.4%	3.5%	199.9 203.5	20.3% 21.3%	1.77 1.72	3.3%	24.7	45.90 05/25/16	89.7	35.0 27.5	20.0	8.8	2.8	4.3	17.9	35.4	91.2			
0.00	COGNIZANT TECH SOLUTIONS	0.0	3.13 3.11	03/16 0.72 03/15 0.62	3,202.0 2,911.4	15.5%	10.0%	589.1 510.6	18.4% 17.5%	2.74 2.41	14.1%	20.2	62.80 05/25/16	101.0	25.0 20.0	15.0	14.0	1.4	2.8	16.0	38.3	131.3			
1.80	Costco	1.2	5.67 5.61	02/16 1.24 02/15 1.35	28,170.0 27,454.0	-8.4%	2.6%	841.0 870.0	3.0% 3.2%	5.22 5.12	2.0%	25.7	144.07 05/25/16	95.1	30.0 27.0	24.0	8.6	3.0	5.6	11.3	127.9	234.1			

AFSI (-19.2% missing 13%), FAST (3.3% missing 8.8%), and COSTCO (2% missing 8.6%)

2. What is Fastenal's strategic growth plan? What changed with Q1 results?

Summary of 2015 10-K	Summary of 2016 Q1 10-Q
1. Continue adding people to stores. 1668 added in 2015 (up 13.6%)	1. Store employee count has dropped by 303 since the end of December 2015.
2. Expand store openings. Goal is to increase (open) 60-75 (2-3%) in 2016.	2. 17 new stores opened but closed 12 due to "not meaningful" impact to sales.
3. Increase national accounts and onsite customers, YOY.	3. 50 new national accounts. Expanding vs. contracting accounts improved slightly from 49 to 51 to 53 to 47. The norm is 3 to 1.
4. Convert 800 stores to Customer Service Project (CSP) format in 2016 which expands inventory placement to enhance same-day capabilities.	4. 185 stores have been converted to the CSP format.

QUALITY (cont.)

Growth plans are to add 60-75 stores but Q1 only added 4 stores with a net loss of employees. National accounts are not expanding as desired. Only 185 out of 300 stores have been converted to CSP format. Originally planned growth is in jeopardy. Consider reducing growth estimates.

- If we decided that Fastenal was more likely to only grow at 1% for the next few years how would that adjustment change the PERT?

DIV	COMPANY	% YLD	EST EPS NXT 12 MO	EPS		SALES		PRE-TAX PROFIT			TTM EPS		PROJ P/E	PRICE	PROJ RV	PROJ 5 YR P/E RATIOS			EST EPS GROWTH	PEG RATIO	U/D RATIO	% TOTAL RETURN	EST FIVE YEARS	
				QTR END	\$	% CHG	MILL \$	% CHG	MILL \$	% CHG	% SALES	\$				% CHG	HI	AVG					LOW	LOW PRICE
0.00	Biogen Ide c	0.0	17.66 18.96	03/16 4.43	2,726.8	1,337.6	49.1%	16.28	14.6	277.26	65.0	30.0	7.9	1.9	10.4	20.8	229.7	770.7						
				03/15 3.49	2,655.0	1,110.7	43.5%	13.86		05/25/16		22.5												
					26.8%		20.4%				15.0													
					6.7%		-17.8%																	
0.60	AmTrust Fi nancial Se rvs	2.3	2.76 3.14	03/16 0.56	1,275.9	253.5	19.9%	2.44	8.4	26.23	79.6	12.0	13.0	0.6	7.1	19.9	21.3	61.4						
				03/15 0.93	1,112.5	308.6	27.7%	3.03		05/25/16		10.5												
					-39.1%		-19.2%				9.0													
0.00	COGNIZANT TECH SOLUT IONS	0.0	3.13 3.11	03/16 0.72	3,202.0	589.1	18.4%	2.74	20.2	62.80	101.0	25.0	14.0	1.4	2.8	16.0	38.3	131.3						
				03/15 0.62	2,911.4	510.6	17.5%	2.41		05/25/16		20.0												
					15.5%		15.4%				15.0													
1.80	Costco	1.2	5.67 5.61	02/16 1.24	28,170.0	841.0	3.0%	5.22	25.7	144.07	95.1	30.0	8.6	3.0	5.6	11.3	127.9	234.1						
				02/15 1.35	27,454.0	870.0	3.2%	5.12		05/25/16		27.0												
					-8.4%		2.6%				24.0													
							-3.3%																	
							2.0%																	
1.20	FASTENAL C O	2.6	1.78 1.86	03/16 0.44	986.7	199.9	20.3%	1.77	24.7	45.90	89.7	35.0	1.0	24.7	2.1	9.7	35.4	67.7						
				03/15 0.43	953.3	203.5	21.3%	1.72		05/25/16		27.5												
					1.4%		3.5%				20.0													
							-1.8%																	
							3.3%																	

Adjusting the growth of FAST from 8.8% to 1% reduces its %Total Return from 17.9% to 9.7% lowering it on the PERT to the bottom, as the company with the least potential return.

Challenge

- What is Costco's strategic growth plan. (Use www.sec.gov to find their most recent 10-K).

Chapter 12 VALUATION

Goal

Use the knowledge, skills and resources to identify and justify buys and sells that improve the portfolio.

Objectives

Use the reward measures on PERT to identify when a company is a buy, hold, or sell

Use the risk measures on PERT to identify when a company is a buy, hold, or sell

Concepts

Valuation

Watch List

Reward Measures: Total Return (TR), P/E Expansion

Risk Measures: Upside/Downside Ratio (U/D), P/E to Growth Ratio (PEG), Relative Value (RV)

Tools/Resources

Portfolio Evaluation Review Technique (PERT)

Instructional Background

Valuation is used to determine which companies to buy, hold, or sell. Ideally, valuation is a process used to determine a company's intrinsic value (price/share). A company's book value/share is often considered the intrinsic value. However, when factoring future growth, the fair price/share is a multiple of the book value/share. When the market price is above the intrinsic value; the stock is considered over-priced. When the market price is below the book value; the stock is considered underpriced. Obviously, the investor's goal is to pay an under-valued price; and sell at an over-valued price, or buy low and sell high. Every buy and sell will maintain or improve your portfolio in one or more ways. For each buy and sell verify what will improve risk or reward; and how: diversification, quality, valuation.

By reviewing your diversification and quality you will already be influenced about buys and sells. You may already know to avoid buying more of one sector or company, or, you found a company that has lost its quality rating and will be sold regardless of its valuation. This process will add to this existing list of influences and decisions and provide justifiable buy and sell recommendations that will improve your portfolio.

Watch List

Before reviewing your current portfolio for buys and sells use what you already know about diversification and quality to add one or two companies from your watch list that you expect to meet all criteria for a new buy. If possible, send these recommendations to the partnership in advance of the meeting for review and/or assign a partner to present the "Study of the Month".

Buy and Sell Criteria

Buy and sell criteria needs to be a decision made by the partnership and understood by every member as a decision made by the partnership and changeable by the partnership. The key buy/sell criteria taught by BI are used here and apply only to companies that retain their "quality" rating.

VALUATION (cont.)

The SSG provides the PERT five values we use to evaluate the company's valuation.

Qualified as a BUY when every reward and risk condition is satisfied (all measures found on the PERT):

- 1) Reward measures
 - a) The total return (TR) is greater than or equal to 15%. (Alternative: TR is greater than or equal to the portfolio average total return, *18.2% for sample*, see Figure 68 below) ①
 - b) Projected P/E at or near the estimated low P/E (Proj 5 YR P/E Ratios) ②
- 2) Risk measures
 - a) The upside-downside ratio is between 3 and 10. (Greater than 10 requires explanation if a buy recommendation) ③
 - b) P/E to Growth (PEG) ratio is < 1.0. (Alternative PEG < 1.5) ④
 - c) Projected Relative Value (Proj RV) < 100 ⑤

Qualified as a SELL when every reward and risk condition is satisfied (all measures found on the PERT):

- 1) Reward measures
 - a) The total return (TR) is less than 10%. ①
 - b) Projected P/E at or near the estimated high P/E (Proj 5 YR P/E Ratios) ②
- 2) Risk measures
 - a) The upside-downside (U/D) ratio is less than 3. ③
 - b) P/E to Growth (PEG) ratio is > 1.5. ④
 - c) Projected Relative Value (Proj RV) > 100 ⑤

Evaluation for buys and sells based on valuation begins as a very mechanical effort. Once complete, combine these results with your diversification and quality results and allow the partnership to decide buys and sells. If needed, review how each buy and sell will improve the portfolio.

Portfolio Average Potential Percent Total Return (TR)

Section 5 of the SSG calculates the potential percent total return (TR, ①) based on price appreciation plus dividends over 5 years. BI sets this goal at 15%. When the market is down the average portfolio %TR can easily exceed 15% due to depressed prices. Improving the %TR implies buying stocks with a %TR greater than the portfolio average. The dollar-weighted portfolio average %TR is provided on the Portfolio Report Card (TK6) and the Summary Report (Online SSG), Figure 68. The first reward criteria above is only buying companies with a %TR > 15%, or %TR > Portfolio Average %TR. We will use the portfolio average %TR for our sample Portfolio Review, 18.2%.

PM Magic :: Summary Report :: 1/28/2020

Portfolio Total Value \$49,334.23						Portfolio dollar-weighted average US/DS: 4.0 %Total Return: 18.2						
Ticker	Company	Price Date	Price	Shares	Total Value	% of Portfolio	Current PE	Buy Below	Sell Above	US/DS	% Tot Ret	Rec
\$CASH	\$CASH	1/28/2020	--	--	1,303.36	2.6	--	--	--	--	--	--
AL	Air Lease	1/27/2020	44.35	92.4	4,096.03	8.3	9.0	51.20	84.90	5.8	18.5	Buy
BABA	Alibaba Group Holdin	1/27/2020	205.47	11.5	2,357.73	4.8	24.5	272.70	518.20	7.8	25.5	Buy

Figure 68 - Summary Report (PDF)

VALUATION (cont.)

Using PERT to find BUYS.

1. Start by updating all SSGs.
2. Sort PERT by %Total Return, Figure 69, (high to low).

Company Name	Div	% Yield	Est EPS Next 12 Mo	EPS			Sales			Pre-Tax Profit			TIM EPS			Proj PE	Price	Proj RV	Proj P/E Ratios			Est EPS Growth	PEG Ratio	UD Ratio	% Total Return	Est 5 Years	
				Qtr End	\$	% Chg	Mill \$	% Chg	Mill \$	% Chg	Mill \$	% Chg	Sales	\$	% Chg				Hi	Avg	Low					Low Price	High Price
Alibaba Group Holdin	0.00	0.0	9.70	09/19/18	3.92	250.3%	16968.5	35.6%	12193.2	380.4%	71.9%	8.39	141.0%	21.2	205.47	68.3	37.0	31.0	25.0	15.6	1.4	7.8	25.5	150.0	640.9		
CVS Health	2.00	2.8	6.48	09/19/18	1.17	-14.0%	64547.0	36.6%	2133.0	12.3%	3.3	5.89	277.6%	11.0	70.97	59.2	22.0	18.5	15.0	10.0	1.1	3.8	25.3	35.0	208.7		
Axos Financial	0.00	0.0	2.96	09/19/18	0.66	13.8%	122.8	19.5%	56.7	15.0%	46.1%	2.57	4.9%	9.5	27.96	70.1	16.0	13.5	11.0	15.0	0.6	6.9	24.2	20.0	82.7		
Constellation Brands	2.96	1.6	4.52	11/19/18	1.85	18.6%	1999.4	1.4%	-292.4	-184.2%	-14.6%	4.15	-68.9%	42.2	190.90	228.1	22.0	18.5	15.0	9.0	4.7	8.4	24.0	150.0	534.0		
United Rentals	0.00	0.0	16.69	09/19/18	0.88	26.7%	2488.0	17.6%	510.0	10.9%	20.5%	14.51	23.2%	8.8	146.27	76.2	14.0	11.5	9.0	15.0	0.6	4.3	22.8	85.0	408.6		
Bank OZK	0.80	2.9	3.59	09/19/18	0.81	39.7%	243.6	0.4%	136.5	36.7%	56.0%	3.42	-2.0%	7.7	27.59	61.4	15.0	12.5	10.0	5.1	1.5	5.0	20.8	20.0	65.8		
Ultra Beauty	0.00	0.0	13.16	10/19/18	2.25	3.2%	1682.5	7.9%	168.7	-1.1%	10.0%	11.86	10.4%	20.8	273.70	65.0	37.0	32.0	27.0	11.0	1.9	3.5	20.0	155.6	682.1		
Air Lease	0.43	1.0	5.55	09/19/18	1.34	1.5%	530.9	17.8%	193.8	8.0%	36.5%	4.91	-35.2%	8.0	44.35	84.1	12.0	9.5	7.0	13.0	0.6	5.8	18.5	34.4	101.7		
Signature Bank	1.12	0.8	12.27	09/19/18	2.75	-3.2%	334.0	1.4%	198.5	-3.0%	59.4%	11.05	31.4%	11.8	145.01	76.3	21.0	15.5	10.0	11.0	1.1	3.5	17.6	93.0	326.6		
Tractor Supply	1.20	1.3	5.08	09/19/18	1.02	7.4%	1984.1	5.4%	156.9	5.5%	7.9%	4.56	11.8%	18.5	93.99	86.1	25.0	21.5	18.0	11.3	1.6	4.2	16.5	70.0	194.7		
Skyworks Solutions	1.58	1.4	5.21	12/19/18	1.50	-6.3%	896.1	-7.8%	278.7	-13.9%	31.1%	4.78	-23.5%	22.4	116.88	102.0	30.0	22.0	14.0	9.0	2.5	1.8	14.2	60.0	220.6		

Figure 69 - PERT sorted by %Total Return, Page 1

3. On line C1a, Figure 70, list all stock symbols whose TR (Column 1) is greater than 18.2% (portfolio average). For example, Air Lease (AL)'s %TR of 18.5% is greater than 18.2%, etc.
4. On line C1b, Figure 70, list all stock symbols from C1a with a Projected P/E near or below its Projected 5 year P/E Low (columns 2). For example, AL's Projected P/E is 21.2 which is below its 5-year P/E low of 25.
5. On line C1c, Figure 70, list all stock symbols from C1b with a PEG<1.5 (4) and RV<100 (5) and U/D>3 (3). For example, AL's PEG is 0.6; RV is 84.1; U/D is 5.8, etc.
6. On line C1d, Figure 70, list all stock symbols included in all three lines above. Buying any of these stocks will improve the portfolio reward with acceptable risk.

C. Value = Buy low; Sell high	
1. Current BUY LOW opportunities	
a. Stocks w/Total Return (TR) > 18.2% (see D2 below) 1	AL, ULTA, OZK, URI, STZ, AX, CVS, BABA
b. Projected P/E at or near estimated low avg P/E 2	AL, ULTA, OZK, URI, AX, CVS, BABA
c. PEG < 1.5 and RV < 100 and U/D > 3 3 4 5	AL, URI, AX, CVS, BABA
d. Meets all three buy criteria	AL, URI, AX, CVS, BABA
2. Current SELL HIGH opportunities	
a. Stocks w/Total Return (TR) < 10% (market) 1	V, LUV, TJX
b. Projected P/E at or near estimated high avg P/E 2	V
c. PEG > 1.5 and RV > 100 and U/D < 3 3 4 5	V, TJX
d. Meets all sell criteria above	V
Opportunities in improve portfolio valuation:	
<ul style="list-style-type: none"> • Consider buying AL, URI, AX, CVS, BABA to improve risk and reward • Consider selling V to improve risk and reward 	

Figure 70 - Portfolio Review Valuation

VALUATION (cont.)

Company Name	Div	% Yield	Est EPS Nxt 12 Mo	EPS			Sales		Pre-Tax Profit			T/M EPS		Proj PE	Price	Proj RV	Proj 5Yr P/E Ratios			Est EPS Growth	PEG Ratio	U/D Ratio	% Total Return	Est 5 Years	
				Qtr End	S	% Chg	Mill S	% Chg	Mill S	% Chg	% Sales	S	% Chg				Hi	Avg	Low					Low Price	High Price
Monster Beverage	0.00	0.0	2.23	09/19/0.55 09/18/0.48	14.6 %	1133.6 1016.2	11.6 %	398.6 342.6	16.3 %	35.2 % 33.7 %	1.99 1.69	17.8 %	29.8	66.60 1/27/2020	99.4	35.0	30.0	25.0	12.2	2.4	2.7	13.2	45.0	123.8	
Amgen	5.28	2.4	13.68	09/19/3.27 09/18/2.86	14.3 %	5737.0 5904.0	-2.8 %	2277.0 2094.0	8.7 %	39.7 % 35.5 %	13.03 12.12	7.5 %	16.3	222.95 1/27/2020	88.1	22.0	18.5	15.0	5.0	3.3	2.0	12.0	152.0	365.9	
TJX Companies	0.74	1.2	2.84	10/19/0.68 10/18/0.61	11.5 %	10451.3 9825.8	6.4 %	1122.1 1046.5	7.2 %	10.7 % 10.7 %	2.55 2.45	4.3 %	21.4	60.93 1/27/2020	104.5	24.0	20.5	17.0	11.5	1.9	2.3	11.7	43.4	100.6	
Southwest Airlines	0.70	1.2	4.58	12/19/0.98 12/18/1.17	-16.2 %	5729.0 5704.0	0.4 %	666.0 817.0	-18.5 %	11.6 % 14.3 %	4.28 4.31	-0.7 %	12.3	56.25 1/27/2020	98.3	15.0	12.5	10.0	7.0	1.8	2.4	10.9	42.0	90.0	
Visa	1.00	0.5	6.12	09/19/1.34 09/18/1.23	8.9 %	6137.0 5434.0	12.9 %	3711.0 3538.0	4.9 %	60.5 % 65.1 %	5.32 3.94	35.0 %	33.0	201.69 1/27/2020	117.7	31.0	28.0	25.0	15.0	2.2	2.2	10.9	143.0	331.7	

Figure 71 - PERT sorted by %Total Return, page 2

Using PERT to find SELLS

1. If needed, update all SSG's and sort the PERT by %TR (high to low).
2. On line C2a, Figure 70, list all stock symbols whose TR (Column ①) is less than 10%. For example, Visa's (V) %TR of 10.9% is near 10%; as is Southwest (LUV). TJX is included due to sell consideration comments in the quality section, see Figure 67, page 84.
3. On line C2b, Figure 70, list all stock symbols from C2a with a Projected P/E near or above its Projected 5 year P/E High (columns ②). For example, V's Projected P/E is 33.0 which is above its 5-year P/E high of 31.
4. On line C2c, Figure 70, list all stock symbols from C2b with a PEG < 1.5 ④ and RV < 100 ⑤ and U/D > 3 ③. For example, V's PEG is 2.2; RV is 117.7; U/D is 2.2, etc. TJX is included due to sell consideration comments in the quality section, see Figure 67, page 84.
5. On line C2d, Figure 70, list all stock symbols included in all three lines above. Selling any of these stocks will improve the portfolio reward and risk.

Opportunities to improve portfolio valuation

With our sample portfolio we have found five companies, if purchased, will improve our potential reward and reduce our overall portfolio risk. Visa, if sold, will also improve our portfolio by improving potential reward and reducing risk.

Guided Practice

1. What is the purpose of valuation?
We use valuation to determine which of our quality companies is a buy, hold, or sell.
2. How might you constantly inject new companies into your portfolio as part of this process?
Add one or two new buys to the PERT each month from the watch list that will qualify as a buy in addition to blending well with your diversity.

VALUATION (cont.)

3. What are the reward measures and their criteria to qualify a company for a buy? Sell?

	Measure/Criteria	Buy	Sell
Reward	Total Return (TR)	≥ 15%	< 10%
	Projected P/E	Near est. low P/E	Near est. high P/E
Risk	Upside/Downside (U/D)	≥ 3	≤ 3
	P/E to Growth (PEG)	≤ 1.5	≥ 1.5
	Relative Value (RV)	< 100	> 100

4. If a company passes all the buy criteria or all the sell criteria does that mean you must buy or sell the company? Why?

Any company passing all the buy or sell criteria only means if bought/sold it will improve the portfolio's reward and risk but does not necessarily improve diversity or quality.

5. Why would someone vote to buy a company with less potential reward than another company?

Their choice may provide less risk or may complement diversity and/or quality in a preferred manner.

Independent Practice

1. Fill out the valuation table and identify which company would improve the portfolio reward and risk.

DIV	COMPANY	% YLD	ESTEPS NXT 12 MO	EPS		SALES		PRE-TAX PROFIT			TTM EPS		PROJ P/E	PRICE	PROJ RV	PROJ 5 YR P/E RATIOS			EST EPS GROWTH	PEG RATIO	U/D RATIO	% TOTAL RETURN
				QTR	%	MILL	%	MILL	%	%	\$	%				HI	AVG	LOW				
1.04	Skyworks Solutions	1.6	5.91 5.27	03/16 1.08 03/15 0.85	26.3%	775.1 762.1	1.7%	255.4 221.6	33.0% 29.1%	15.3%	5.14 3.34	54.0%	12.7	66.78 06/02/16	50.7	35.0 25.0	15.0	15.0	0.8	15.2	40.5	
0.00	Signature Bank	0.0	8.75 8.44	03/16 1.97 03/15 1.64	20.2%	288.0 232.6	23.8%	174.3 143.4	60.5% 61.6%	21.6%	7.61 6.24	22.0%	15.9	134.35 06/02/16	72.4	26.0 22.0	15.0	15.0	1.1	12.1	23.1	
1.88	GILEAD	2.2	11.94 11.75	03/16 2.53 03/15 2.76	-8.6%	7,794.0 7,594.0	2.6%	4,502.0 5,239.0	57.8% 69.0%	-14.1%	11.69 8.81	32.8%	7.3	86.19 06/02/16	52.4	18.0 14.0	2.2	3.4	7.2	22.4		
0.00	F5 Networks	0.0	5.61 5.79	03/16 1.11 03/15 1.18	-5.7%	483.7 472.1	2.4%	124.0 136.1	25.6% 28.8%	-8.9%	5.05 4.70	7.5%	19.1	110.41 06/02/16	73.3	32.0 26.0	11.0	11.0	1.7	6.2	20.0	
4.00	AMGEN	2.5	10.30 11.00	03/16 2.50 03/15 2.11	18.6%	5,527.0 5,033.0	9.8%	2,290.0 1,876.0	41.4% 37.3%	22.1%	9.45 7.41	27.5%	14.5	159.19 06/02/16	72.4	25.0 20.0	9.0	9.0	1.6	9.8	18.4	
0.00	LKQ	0.0	1.54 1.95	03/16 0.35 03/15 0.35	0.0%	1,921.5 1,773.9	8.3%	180.5 175.6	9.4% 9.9%	2.8%	1.38 1.25	9.9%	16.9	32.92 06/02/16	67.5	30.0 25.0	12.0	12.0	1.4	6.1	17.3	
2.16	T. Rowe Price	2.8	4.97 4.70	03/16 1.15 03/15 1.13	1.6%	994.1 1,027.0	-3.2%	496.0 504.6	49.9% 49.1%	-1.7%	4.62 4.53	2.1%	16.3	76.36 06/02/16	87.8	22.0 18.5	7.5	7.5	2.2	3.4	15.6	
0.56	Visa	0.7	3.15 2.96	03/16 0.71 03/15 0.63	12.9%	3,626.0 3,409.0	6.4%	2,442.0 2,285.0	67.3% 67.0%	6.9%	2.82 2.23	26.3%	26.9	79.56 06/02/16	107.5	28.0 25.0	11.5	11.5	2.3	1.9	12.0	
0.00	Quanta Services	0.0	1.62 1.72	03/16 0.13 03/15 0.25	-49.2%	1,713.7 1,887.0	-9.2%	34.3 92.6	2.0% 4.9%	-62.9%	0.49 1.35	-63.9%	13.7	23.63 06/02/16	74.3	22.0 18.5	27.9	27.9	0.5	5.4	8.9	
2.00	SCHLUMBERGER LTD	2.7	1.35 1.18	03/16 0.40 03/15 0.76	-47.6%	6,565.0 10,297.0	-36.2%	622.0 1,294.0	9.5% 12.6%	-51.9%	1.25 3.85	-67.6%	63.9	75.36 06/02/16	319.3	24.0 20.0	7.9	7.9	8.1	0.0-	-9.2	

VALUATION (cont.)

Current BUY LOW opportunities	
1. Companies w/Total Return (TR) > 15%	
2. Projected P/E at or near estimated low average P/E (4B)	
3. U/D > 3 AND PEG ≤ 1.5 AND RV < 100	
4. Meets all three buy criteria	
Current SELL HIGH opportunities	
1. TR < 10% (Market)	
2. Projected P/E at or near estimated high avg P/E (4A)	
3. U/D < 3 AND RV > 100 AND PEG ≥ 1.5	
4. Meets all three sell criteria above	

Challenge

1. When sorting the PERT by %Total Return, high to low, which companies tend to be at the top, middle, and bottom?
2. When a company's fundamentals are slowing, and you reduce the growth rate of a company how does that change impact its placement in the PERT when sorted by %Total Return?
3. When a company's price has increased significantly how does that impact its placement on the PERT when sorted by %Total Return? What about when the price drops significantly?

Independent Practice Answer

Current BUY LOW opportunities	
1. Companies w/Total Return (TR) > 15%	SWKS, SBNY, GILD, FFIV, AMGN, LKQ, TROW
2. Projected P/E at or near estimated low avg P/E (4B)	SWKS, SBNY, GILD, FFIV, AMGN, LKQ, TROW
3. PEG < 1.5 and RV < 100 and U/D > 3	SWKS, SBNY, LKQ
4. Meets all three buy criteria	SWKS, SBNY, LKQ
Current SELL HIGH opportunities	
1. TR < 10% (Market)	PWR, SLB
2. Projected P/E at or near estimated high avg P/E (4A)	SLB
3. PEG > 1.5 and RV > 100 and U/D < 3	SLB
4. Meets all three sell criteria above	SLB

Challenge Answers

1. When sorting the PERT by %Total Return, high to low, which companies tend to be at the top, middle, and bottom?
Buys at the top; Sells at the bottom; and Holds in the middle

VALUATION (cont.)

2. When a company's fundamentals are slowing, and you reduce the growth rate of a company how does that change impact its placement in the PERT when sorted by %Total Return?
The company will be lowered. When the earnings growth is lowered, that lowers the 5-year EPS in section 4 which lowers the estimated high price. Lowering the high price then lowers the %Total Return in section 5.

3. When a company's price has increased significantly how does that impact its placement on the PERT when sorted by %Total Return? What about when the price drops significantly?
Price increases (yea) lower the company on the PERT eventually into the sell zone. Price drops increase the %Total Return moving the company higher on the PERT sorted by %Total Return into the buy zone.

Chapter 13 PERFORMANCE

Goal

Use the knowledge, skills and resources needed to track your performance and identify behaviors to continue, improve, or stop.

Objectives

Measure and track realized gains and losses (winners vs. losers)

Measure and track portfolio potential return

Measure and track portfolio performance vs. market index performance

Concepts

Rule of Five

Realized and Unrealized Gains and Losses

Annual Internal Rate of Return (AIRR)

Tools/Resources

Club Accounting Software (Bivio or MyICLUB)

Capital Gains Report

Summary Report – %Total Return (Online SSG)

Portfolio Report Card – Total Return (Toolkit 6)

Benchmark Performance Report (Bivio)

Investment Performance Report (MyICLUB)

S&P 500 Return Calculator (<https://dqydj.com/sp-500-return-calculator/>)

Instructional Background

Rule of Five

How should you do? Using the BI methodology should we expect any losses at all? You bet! We use the Rule of Five to set performance expectations.

The Rule of Five expects 1 of 5 (20%) companies in the portfolio to outperform growth estimates; 1 of 5 (20%) companies to underperform growth estimates; and 3 of 5 (60%) companies to meet growth expectations.

How are we doing? Are we meeting our investment goals? The Performance section will help us answer the question.

PERFORMANCE (cont.)

D. Performance = Beat market and/or 15% real & unrealized returns	Goal	
1. History of buy low/sell high (Capital Gains Report)		
a. % winners > \$0 gain	80%+	
2. Portfolio Potential Return (Summary Report)		
a. %Total Return (TR)	15%+	
3. Investment Performance Report		
a. Last 5-years vs. Market	15%+	
b. Last 3-years vs. Market	15%+	
c. 1-year (TTM) vs. Market	15%+	
Opportunities to improve performance: D1: Use Capital Gains and Losses report to calculate % winners > \$0 D2: Find %Total Return in Summary Report header (online SSG) or Portfolio Report Card (Toolkit 6). D3: Use club accounting's Investment Performance Report to calculate club vs. market performance.		

The first section focuses on history (realized gains) – how have we done? The second section focuses on the future – is our portfolio expected to meet our 15% goal in the future? Finally, the last section – how are we doing compared to the market (S&P 500)?

1. Performance History

The history question (realized gains) are answered using the capital gains report which is available from your broker and club accounting software.

The question is, “% winners”. Our goal is 80% winners or more.

According to the Rule of Five, 20% of our investments outperform; 20% underperform; and 60% meet expectations. Combining investments that meet expectations with outperform suggests at least 80% of our investments should show a positive result.

Count the number of positive gain lots and divide by the total for the percent winners. If you have many dividends, due to a dividend reinvestment option, you may want to exclude those transactions in favor of trades based on your judgment. Hint, count losers instead if they are fewer. Subtract your result from 1 for the final percentage.

$$\% \text{ winners} = \text{count of winners (gain >0)} / \text{count of all lots sold}$$

Shares	Name	Acquisition Date	Date Sold	Sales Price	Cost Basis	Wash Sa	Gain/(Loss)
9.64	F5 Networks Inc (FFIV)	6/1/2015	2/21/2017	1,391.29	1,200.00		191.29
20.46	Quanta Services Inc (PWR)	4/21/2015	2/21/2017	786.35	600.00		186.35
14.18	Quanta Services Inc (PWR)	2/17/2015	2/21/2017	545.05	400.00		145.05
7.73	Gilead Science (GILD)	2/17/2015	2/21/2017	533.27	800.00		(266.73)
4.41	Gilead Science (GILD)	1/20/2015	2/21/2017	304.50	450.00		(145.50)
4.78	Gilead Science (GILD)	10/21/2014	2/21/2017	330.14	500.00		(169.86)
12.05	T Rowe Price Group Inc (TROW)	4/21/2015	10/16/2017	1,145.91	1,000.00		145.91
3.68	T Rowe Price Group Inc (TROW)	11/19/2014	10/16/2017	349.93	300.00		49.93
6.37	T Rowe Price Group Inc (TROW)	8/18/2014	10/16/2017	605.56	500.00		105.56
5.00	Schlumberger Limited (SLB)	5/20/2014	12/18/2017	319.10	504.32		(185.22)

Figure 72-Sample Capital Gains Report

PERFORMANCE (cont.)

In the sample above, Figure 72, it shows 6 (green) out of 10 lots sold with gains above zero, for 60% winners.

D. Performance = Beat market and/or 15% real & unrealized returns	Goal	
1. History of buy low/sell high (Capital Gains Report)		
a. % winners > \$0 gain	80%+	60%

When we miss historical (realized return) performance goals, we increase our focus on two areas:

- **Don't pay too much!** When a proposed buy is presented in a very persuasive manner, but the numbers don't meet the acceptable risk or reward criteria, don't buy. Only buy companies that clearly show acceptable reward and risk measures (buy low).
- **Buy and replace** – not buy and hold. Selling high is harder than buying low. After all, the price might continue up. However, once a company's price has appreciated enough that reward and risk measures are unacceptable – sell high for profit and replace the company with a different company with acceptable (buy low) risk and reward measures. Don't sell only because the price has appreciated. Sell when both reward and risk measures become unacceptable as detailed in the Valuation chapter.

2. Potential Future Returns

Is the portfolio projected (potential) annual return 15% or more?

2. Portfolio Potential Return (Summary Report)		
a. %Total Return (TR)	15%+	

Potential return is calculated in section 5 of the SSG. This calculation assumes you buy today, sell in 5 years, earnings grow for 5 years at your estimated EPS growth rate, and you sell at the high P/E. The likelihood of all these assumptions coming true are slim. However, by applying these assumptions to every company we create a key valuation judgment that allows us to compare all the companies in the portfolio. Potential Total Return (TR) is a big-deal result.

The portfolio's weighted average Total Return (TR) is provided in the Online SSG program on the Summary Report and on the Portfolio Report Card in Toolkit6.

Our sample portfolio has an average potential total return of 18.1%; shown here on the right side of the online Summary Report header.

Report Options												
Summary PERT Diversification												
Report Details												
Show All entries												
Portfolio Total Value						\$50,980.51	Portfolio dollar-weighted average			US/DS: 3.8	%Total Return: 18.1	
Ticker	Company	Price Date	Price	Shares	Total Value	% of Portfolio	Current PE	Buy Below	Sell Above	US/DS	% Tot Ret	Rec
\$CASH	\$CASH	11/21/2019	--	--	693.39	1.4	--	--	--	--	--	--
AL	Air Lease	11/19/2019	45.11	92.4	4,168.16	8.2	9.2	56.60	114.90	5.6	26.5	Buy
AMGN	Amgen	11/19/2019	224.50	4.7	1,064.13	2.1	17.2	193.80	320.30	1.7	12.9	Hold
RARA	Alibaba Group Holdin	11/19/2019	185.25	0.0	0.00	0.0	22.1	272.70	518.20	12.9	28.2	Buy

PERFORMANCE (cont.)

Portfolio dollar-weighted average		US/DS: 3.8	%Total Return: 18.1		
Current PE	Buy Below	Sell Above	US/DS	% Tot Ret	Rec

Figure 73- Online SSG Summary Report header (zoom-in)

D. Performance = Beat market and/or 15% real & unrealized returns	Goal	
1. History of buy low/sell high (Capital Gains Report)		
a. % winners > \$0 gain	80%+	60%
2. Portfolio Potential Return (Summary Report)		
a. %Total Return (TR)	15%+	18.1%

When the %Total Return is below 15% it means we need to buy more companies with 15% or more %Total Return and/or sell companies with the lowest %Total Return (at minimum, less than 10%), to raise the average potential return.

Our sample portfolio has an average %Total Return of 18.1%. Maintaining a value above 15% requires replacing (selling) companies with unacceptable risk and reward, only with companies with 15% or more %Total Return. Optimizing %Total Return is accomplished by replacing lower potential companies with companies with %Total Return above the portfolio average; 18.1% in this example, when possible.

3. Portfolio vs. Market

Did we beat the market?

3. Investment Performance Report		
a. Last 5-years vs. Market	15%+	
b. Last 3-years vs. Market	15%+	
c. 1-year (TTM) vs. Market	15%+	

Measuring market performance is tricky but club accounting software does an excellent job of creating a valid comparison by calculating the annual internal rate of return (AIRR) which accounts for all cash flows. Club accounting software uses the portfolio balance for the selected start date to buy shares of an S&P 500 index (others are available). It then buys and sells shares of the index based on portfolio cash flows until the selected end date and compares the index (simulated) investment result against the actual portfolio balance on the end date, providing a portfolio return and market return for comparison. The ultimate goal is to not only beat the market but a 15% annualized return allowing our investment to double in about 5 years.

For individual investors not using club accounting software you can use an S&P 500 Return Calculator (<https://dqydj.com/sp-500-return-calculator/>). When available, use the annualized return including dividend reinvestments. This calculator provides an accurate (AIRR) result but unlike the accounting software it does not simulate all cash flows (in and out) of your portfolio.

PERFORMANCE (cont.)

D. Performance = Beat market and/or 15% real & unrealized returns	Goal	
1. History of buy low/sell high (Capital Gains Report)		
a. % winners > \$0 gain	80%+	60%
2. Portfolio Potential Return (Summary Report)		
a. %Total Return (TR)	15%+	18.1%
3. Investment Performance Report		
a. Last 5-years vs. Market	15%+	14.8% vs. 13.2%
b. Last 3-years vs. Market	15%+	12.8% vs. 11.5%
c. 1-year (TTM) vs. Market	15%+	-5.4% vs. 3.6%
D1: Use Capital Gains and Losses report to calculate % winners > \$0		
D2: Find %Total Return in Summary Report header (online SSG) or Portfolio Report Card (Toolkit 6).		
D3: Use club accounting's Investment Performance Report to calculate club vs. market performance.		

Our sample portfolio, over the last 5 years had a benchmark return of 14.8% compared to the Vanguard 500 Index (VFINX) which calculated a return of 13.2% suggesting our portfolio has beat the market on average by 1.6% over the last 5 years and 1.3% over the last three years.

The 1-year difference shows the market beating the portfolio by 9%! The 1-year difference, while accurate, tends to reflect volatility differences. A concentrated portfolio of high-quality companies is normally more volatile than the market, particularly with 10 or fewer stocks. So, the 1-year results show a market and portfolio downturn; only more time will tell if we see normal volatility or poor judgment. The sample expectation remains to beat the market by 1%+ over 3-5 years but the 1-year result should increase diligence to ensure all risk and reward criteria are carefully reviewed for each buy and sell.

Focus your attention on the trend. When you are beating the market, try to increase the return above 15%. When the market is beating the portfolio, look more closely at losing positions and review if you paid too much or sold too early or too late due to bad judgments, or, the victim of circumstance that could not reasonably be predicted (20% underperformer)?

A best practice is to journal reasoning to buy and sell and review all buys and sells at the end of each year. Did all buys and sells follow guidance regarding acceptable risk and reward?

Opportunities to improve portfolio performance

Review the results to determine where improvement is required.

- When realized returns show too many losses increase diligence on quality.
- When potential return is too low increase diligence on diversification and buying low
- When investment performance is too low increase diligence on selling high.

Consolidation of opportunities.

At the bottom of the Portfolio Review consolidate all identified opportunities. Attempt to reconcile conflicting opportunities but when finished – each potential action, if selected, should expect to improve the portfolio's diversification, quality, valuation, or performance.

For our sample portfolio we combine the results of diversification, quality, and valuation to recommend:

- Increase small (AX) & reduce medium (SBNY, TSCO) positions while avoiding/selling consumer cyclical (TJX)
- Sell Visa (large financial) for profit
- Sell/replace OZK (small financial) with more AX (small financial) to improve quality

PERFORMANCE (cont.)

D. Performance = Beat market and/or 15% real & unrealized returns	Goal	
1. History of buy low/sell high (Capital Gains Report)		
a. % winners > \$0 gain	80%+	60%
2. Portfolio Potential Return (Summary Report)		
a. %Total Return (TR)	15%+	18.2%
3. Investment Performance Report		
a. Last 5-years vs. Market	15%+	14.8% vs. 13.2%
b. Last 3-years vs. Market	15%+	12.8% vs. 11.5%
c. 1-year (TTM) vs. Market	15%+	-5.4% vs. 3.6%
Opportunities to improve portfolio performance: <ul style="list-style-type: none"> • Pay closer attention to quality to reduce losses. • Pay closer attention to selling high to maximize profits. 		
Consolidated portfolio recommendations: <ul style="list-style-type: none"> • Increase small (AX) & reduce medium (SBNY, TSCO) positions while avoiding/selling consumer cyclical (TJX) • Sell Visa (large financial) for profit • Sell/replace OZK (small financial) with more AX (small financial) to improve quality 		

Figure 74 - Portfolio Review Performance w/consolidated recommendation

None of the recommendations are required. However, each recommendation improves the portfolio diversification, quality, and/or valuation risk and reward.

Guided Practice

1. How do we measure our portfolio's historical realized performance?
Analysis of past stock sales using the capital gains report - % winners.

2. What performance goals are we attempting to verify?
Returns \geq 15% for 3-5 years. This portfolio growth rate doubles our money in 5 years.
Results vs. the market.

3. What does the Rule of Five teach us to expect?
20% will underperform; 60% will perform as expected; and 20% will overperform.

4. What should you do if your portfolio is not achieving its goals?
Learn from your mistakes and accept that some losses are not foreseeable. Review each sale for quality and value. Did you adhere to all risk and reward guidance? When realized returns show too many losses increase diligence on quality. When potential return is too low increase diligence on diversification and buying low. When investment performance is too low increase diligence on selling high.

5. Why do we want to only buy companies with a section 5 potential return of 15% or better? Does that mean I should only buy companies with a growth rate of 15% or better also?

If our goal is 15% annual appreciation, we must buy companies with that potential (%Total Return), 15% or better. No, you don't need to only buy companies with an EPS growth rate of 15% or better. You are expected to buy companies that results in an average portfolio EPS growth rate of about 10% (including dividends). You are able to achieve 15% price appreciation by buying at, or near, the bottom of the business cycle (section 4 low P/E) and selling at, or near, the top of the business cycle (section 4 high P/E). This technique plans on about 10% from earnings and dividends with the remaining 5% from P/E expansion, or, selling high after buying low.

PERFORMANCE (cont.)

6. How will the results of diversification and quality influence our choices to buy and sell? When finished with valuation analysis you will have a list of companies that if bought and/or sold will improve the portfolio's risk and reward. However, the final buy and sell decision will need to consider how each buy and sell will impact the portfolio diversification. Often you already have as much of a particular company as you want and despite its potential buy you may choose a different company to avoid overweighting your portfolio in a particular company or sector.

Independent Practice

1. Use the Rule of Five to evaluate the following capital gains results.

Shares	Name	Acquisition Date	Date Sold	Sales Price	Cost Basis	Wash Sa	Gain/(Loss)
7.73	Gilead Science (GILD)	2/17/2015	2/21/2017	533.27	800.00		(266.73)
4.41	Gilead Science (GILD)	1/20/2015	2/21/2017	304.50	450.00		(145.50)
4.78	Gilead Science (GILD)	10/21/2014	2/21/2017	330.14	500.00		(169.86)
9.64	F5 Networks Inc (FFIV)	6/1/2015	2/21/2017	1,391.29	1,200.00		191.29
4.11	F5 Networks Inc (FFIV)	6/29/2015	2/21/2017	594.08	500.00		94.08
20.46	Quanta Services Inc (PWR)	4/21/2015	2/21/2017	786.35	600.00		186.35
14.18	Quanta Services Inc (PWR)	2/17/2015	2/21/2017	545.05	400.00		145.05
30.66	Quanta Services Inc (PWR)	10/26/2015	2/21/2017	1,178.52	600.00		578.52
30.83	LGI Homes Inc (LGIH)	5/22/2017	8/21/2017	1,401.33	1,000.00		401.33
14.27	Cerner Cp (CERN)	1/11/2017	9/18/2017	999.98	712.42		287.56
3.68	T Rowe Price Group Inc (TROW)	11/19/2014	10/16/2017	349.93	300.00		49.93
12.05	T Rowe Price Group Inc (TROW)	4/21/2015	10/16/2017	1,145.91	1,000.00		145.91
6.37	T Rowe Price Group Inc (TROW)	8/18/2014	10/16/2017	605.56	500.00		105.56
0.18	T Rowe Price Group Inc (TROW)	6/30/2017	10/16/2017	17.32	13.61		3.71
0.15	T Rowe Price Group Inc (TROW)	9/29/2017	10/16/2017	14.45	13.71		0.74
0.12	Schlumberger Limited (SLB)	10/16/2017	12/18/2017	7.66	8.12		(0.46)
5.00	Schlumberger Limited (SLB)	5/20/2014	12/18/2017	319.10	504.32		(185.22)
10.57	Schlumberger Limited (SLB)	6/28/2016	12/18/2017	674.35	800.00		(125.65)
31.44	LKQ Corp (LKQ)	2/24/2017	12/18/2017	1,277.25	1,000.00		277.25
26.55	LKQ Corp (LKQ)	3/20/2017	12/18/2017	1,078.77	800.00		278.77

Figure 75 - Sample Capital Gains Report

2. Evaluate the portfolio vs. market performance.

	5-year	3-year	1-year
Club Portfolio	9.1%	6.8%	-3.7%
Vanguard 500 Index	13.1%	11.0%	1.1%

Independent Practice Answers

- Use the Rule of Five to evaluate the following capital gains results.
14/20 = 70% winners; missing 80% goal
- Evaluate the portfolio vs. market performance.
Continually underperforming the market by approximately 4%. Both buying and selling judgments must be reviewed. Increase diligence on selling high.

Chapter 14 BUY/SELL DECISIONS – THE MONTHLY MEETING

Goal

Use the knowledge, skills and resources needed to actively manage a portfolio of quality-growth companies to achieve a 5-year annualized return of 15% or better.

Objective

Use information from the Valuation, Portfolio Review, and PERT to select buys and sells that will improve the portfolio.

Concepts

Justified Incremental Improvements

Tools/Resources

Portfolio Review Checklist (page 107)

Portfolio Review Report (page 113)

Portfolio Evaluation Review Technique (PERT) (page 115)

Instructional Background

The full agenda for the monthly meeting will necessarily carry more agenda items than discussion and motions for buys and sells. However, this chapter is limited to the buy/sell part of the meeting.

The SSG provides the information we need to make informed buy and sell decisions, but the final decisions are made in context of a portfolio. A company can easily be a good buy for one portfolio but a poor choice for another. Portfolio management is a constant balancing act; working to balance risk and reward. During our monthly meetings we combine information from multiple sources to enable informed choices. Each buy and sell must improve the portfolio.

Send 4 reports to each partner before each monthly meeting to provide some time to review the status of the portfolio and potential opportunities for portfolio improvement. Include the following reports:

0. Agenda/Minutes (ignored by this course)
1. Valuation by Company
2. Valuation by Member
3. Portfolio Review (sample on page 113)
4. PERT (sample on page 115)

Before the meeting, or during, the opportunities to improve the portfolio are listed in the Portfolio Review will need to be translated into buy/sell motions. Doing this individually, before the meeting, provides for a richer discussion. Partners can explain and discuss their motions often, revealing incomplete understandings, and sparking teachable moments. Other reports become resources to verify information that can influence priorities and final votes.

Portfolio Review Report

Read the Portfolio Review (page 113) focusing on the improvement opportunities.

- Diversification – reduce or increase growth/sectors/stocks to improve risk and reward
- Quality – buy, sell, or modify due to changing fundamentals
- Valuation – buy or sell due to acceptable or unacceptable risk and reward
- Performance – increase or maintain scrutiny to improve risk and reward

Opportunities to improve portfolio performance: <ul style="list-style-type: none">• Pay closer attention to quality to reduce losses.• Pay closer attention to selling high to maximize profits.
Consolidated portfolio recommendations: <ul style="list-style-type: none">• Increase small (AX) & reduce medium (SBNY, TSCO) positions while avoiding/selling consumer cyclical (TJX)• Sell Visa (large financial) for profit• Sell/replace OZK (small financial) with more AX (small financial) to improve quality

Figure 76 - Portfolio Review Consolidated Recommendations

Buy/sell motions to improve the portfolio begin with individuals and are improved by group discussion. Consider including the benefits in each motion for the minutes. These details will assist later evaluation of wins and losses.

Potential motions from our sample portfolio, Figure 76:

1. Move to sell all OZK (small financial, est EPS growth =5.1%, 4% of portfolio) and purchase/replace with AX (small financial, est EPS growth = 15%, 0% of portfolio) to improve portfolio quality and potential return.
2. Move to sell all TJX for 40% annualized profit to improve portfolio performance, sector diversity, and valuation.

Valuation by Company

The Valuation Statement (page 116) provides a current list of portfolio holdings and details such as percent of portfolio.

In our sample portfolio Valuation report we can confirm that OZK is 4.3% of the portfolio and selling will result in a loss of \$757.64. The loss may be accepted as a cost of replacing a stock that has lost its quality rating due in part to slower than expected growth with a higher quality stock.

We also verify that the sale of TJX would provide a profit of \$468, providing about \$3,500 revenue, or 6% of the portfolio needing to be reinvested. The anticipated 40% annualized profit with a return of \$468 suggests the holding timeframe may be short and worth exploring. (After discussion the partnership decided to increase the estimated high P/E, expecting the price to continue climbing.)

Portfolio Evaluation Review Technique (PERT)

Use the PERT (page 115) to double check the recommendations on the Portfolio Review Report and determine if there are any other possibilities to consider. The PERT is sorted by % Total Return. Consider drawing a line to show companies with returns above the portfolio's average potential return (found at D2A in the Portfolio Review) to consider every company with a potential return that will improve the portfolio. Likewise, consider drawing a line at 10% potential return (market average) to help identify all potential sells.

BUY/SELL DECISIONS – THE MONTHLY MEETING (cont.)

For the recommended replacement of OZK with AX we can verify the estimated EPS growth rate of OZK is 5.1% but the actual TTM EPS is -2.0%. The estimated EPS growth rate for AX is 15.0% and the actual TTM EPS is 4.9% and Quarterly EPS is 13.8%.

TJX shows a relative P/E of 21.4 and an estimated high P/E of 24.0 suggesting there may be additional P/E expansion which should imply some discussion questioning if the sell for profit may be premature.

Justified Incremental Improvement

One or two actions (buys/sells) each month is typically all that is needed to keep a portfolio performing well. Small incremental improvements to the portfolio is key to success. By reviewing and evaluating diversification, quality, valuation, and performance regularly and making routine justifiable adjustments will help you achieve your financial goals while getting a good night's sleep.

Guided Practice

1. Why is the SSG not sufficient to decide if a company should be bought or sold?
Each purchase of a company is part of a portfolio and each buy or sell decision is based on that company's impact on portfolio diversity, quality, valuation, and performance.
2. Which report provides a comprehensive status of the portfolio's current diversity, quality, valuation, and performance?
Portfolio Review
3. What are we attempting to determine with the Portfolio Review report?
Balance between risk and reward. We want to understand the impact of each company considered for buy or sell on diversification, company quality, company valuation, and performance.
4. Which better describes our philosophy: "buy and hold," or, "buy and replace."
Buy and replace. We buy high-potential companies with acceptable risk and reward; we sell low-potential companies with unacceptable risk and reward and replace them with high-potential companies with acceptable risk and reward.
5. Why is the PERT so useful when buying and selling companies?
This is the only report that allows you to compare and contrast reward and risk factors across the entire portfolio. The PERT allows you to prioritize buys and sells by sorting on % Total Return; review of both quality and valuation risk and reward ratios; showing context to the entire portfolio.
6. How is the Portfolio Review translated into buy and sell motions?
The improvement opportunities from each section of the Portfolio Review are combined into a recommended buy/sell actions which identify the justifiable actions that will improve the portfolio reward and risk.
7. What is the requirement of each buy and sell?
It must improve the portfolio.
8. How can a buy or sell improve the portfolio?
All buys and sells impact risk and reward. Improvements to risk and reward can be achieved in diversification, quality, valuation, and performance.

BUY/SELL DECISIONS – THE MONTHLY MEETING (cont.)

Challenge

1. Use the Portfolio Review Checklist (page 107) with the included Portfolio Review template to complete a Portfolio Review for your portfolio.
2. Prepare and distribute all four (company valuation, member valuation, PERT, Portfolio Review) reports for your club.

APPENDIX

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APPENDIX (cont.)

Sample - Portfolio Review Checklist Portfolio Review Checklist (1-Page) (Sample Portfolio Review on page 113)

- Step 1. Update portfolio data and prices. Add wish list companies.
- Update portfolio data and prices
 - Update companies and shares owned from Valuation Statement
 - Update cash amount from Valuation Statement
 - Record portfolio %Total Return on Portfolio Review (D2a and C1a)
- Step 2. Portfolio Diversification (Section A)
- Record Size Diversification in A1
 - Record Estimated Growth Rate in A2
 - Record Sector Diversification in A3
 - Count and record # of stocks/ticker of largest holding @ nn % of portfolio in A4
 - Record %cash in A5.
 - Itemize opportunities to improve portfolio diversification in grey box.
- Step 3. Portfolio Quality (Section B)
- Find 2-3 stocks on your wish list as potential buys – add to portfolio if needed
 - Record ticker of all companies owned missing EPS estimates (magenta highlight) in TTM EPS % Chg in B1a.
 - Itemize opportunities to improve portfolio quality in grey box. Record why each company listed missed earnings. Record if reason is (1) normal business, (2) temporary, or (3) long-term in grey box.
- Step 4. Portfolio Valuation (Section C)
- Buy Low with acceptable reward
- Record companies with TR > Portfolio %Total Return (see D2a) in C1a
 - Record tickers from the previous list with Projected P/E at or near est. low average P/E in C1b
- Buy Low with acceptable risk
- Record tickers from the previous list with acceptable risk in C1c
- Buy Low with acceptable risk and reward
- Record tickers from the previous list as potential buys with acceptable and reward in C1d (“Meets all three buy criteria”)
- Sell High with unacceptable reward
- Record companies with TR < 10% (market) in C2a
 - Record tickers from the previous list with Projected P/E at or near est. high average P/E in C2b
- Sell High with unacceptable risk (C2)
- Record tickers from the previous list with acceptable risk in C2c
- Sell High with unacceptable risk and reward (C2)
- Record tickers from the previous list as potential buys with acceptable and reward (“Meets all three buy criteria”) in C2d
 - Itemize opportunities to improve portfolio valuation in grey box.
- Step 5. Performance (Section D)
- Record (realized gains) percent winners’ performance for current year in D1a
 - Record (future gains) portfolio %Total Return in D2a (completed in step 1)
 - Record (realized + unrealized) performance in D3a, D3b, and D3c
 - Itemize opportunities to improve portfolio performance in grey box.
- Step 6. Consolidated portfolio recommendations
- Itemize recommended opportunities to improve the portfolio in last grey box.

APPENDIX (cont.)

Portfolio Review Checklist (Detailed)

(Sample Portfolio Review on page 113)

Step 1. Update portfolio data and prices. Add wish list companies.

- Update portfolio data and prices
 - *Open My Studies (Online SSG)*
 - *Open Portfolios tab*
 - Select “Refresh All Studies” Actions button
 - Select “Update data and prices” then Ok button
- Update companies and shares owned from Valuation Statement
 - Select the desired Portfolio Name
 - Use the “Edit Portfolio” Action button in the “Portfolios” list to add stocks to a portfolio
 - Use the “Edit Study” Action button in the “Studies...” list below to change shares owned
 - Use the “Delete Study” Action button in the “Studies...” list below to remove holdings from a portfolio
- Update cash amount from Valuation Statement
 - Use the “Edit Portfolio” Action button to Add \$CASH to a portfolio
 - Use the “Edit Study” Action button to change the \$CASH amount in a portfolio
- Record portfolio %Total Return on Portfolio Review (D2a and C1a)
 - Select “Reports” Action button for your portfolio
 - If needed, select the “Portfolio Report” tab in your browser
 - By default, the *Summary Report* will be open
 - Record the %Total Return value on the right side of the header in C1a and D2a.

Step 2. Portfolio Diversification (Section A)

- Record Size Diversification in A1
 - Select Diversification report button
 - Select Company Size Diversification Report from Report Details pull-down
 - Record % Small / % Medium / % Large in A1
- Record %Estimated Portfolio Growth Rate in A2
 - Select PERT report from Report Options
 - Method 1 – Median (least accurate, least effort)
 - Sort by “Est EPS Growth” by clicking on the heading title
 - Count down half of the stocks you own in the column and record the estimated growth rate. (median, or middle)
 - Sort by “% Yield” by clicking on the heading title
 - Count down half of the stocks you own in the column and record the % Yield. (median, or middle)
 - Add together the median Est EPS Growth and % Yield as your Estimated Portfolio Growth Rate in A2
 - Method 2 – Average (more accurate, more effort)
 - Use a spreadsheet or calculator to average both the Est EPS Growth and %Yield columns. (average)

APPENDIX (cont.)

- Add together the average Est EPS Growth and % Yield as your Estimated Portfolio Growth Rate in A2
- Method 3 – Dollar Weighted Average (most accurate, most effort)
 - Use a spreadsheet or calculator to list the Est EPS Growth (PERT), % Yield (PERT), and % of Portfolio (Summary) in columns A, B, and C respectively.
 - In column D, Multiply Est EPS Growth x % of Portfolio and sum at the bottom. (weighted average)
 - In column E, Multiply % Yield x % of Portfolio and sum at the bottom. (weighted average)
 - Add together the weighted average Est EPS Growth and % Yield as your Estimated Portfolio Growth Rate in A2
- Consistency is more important than accuracy. Our objective is to match the market growth rate to keep the portfolio volatility like the market's volatility.
- Record Sector Diversification in A3
 - Select Sector & Industry Diversification report from Report Detail pull-down
 - Count and record # of sectors/ largest sector name; @ nn% of portfolio in A3
- Count and record # of stocks/ticker of largest holding @ nn % of portfolio in A4
 - *Open Summary Report (Online SSG) or Valuation Statement (Toolkit6)*
 - Count and record # of stocks/ticker (include cash) of largest holding @ nn % of portfolio in A4
- Record %cash in A5.
- Itemize opportunities to improve portfolio diversification in grey box.
 - Compare results to goals.
 - Record opportunities to improve diversification in the grey box at the end of section A.

Step 3. Portfolio Quality (Section B)

- Find 2-3 stocks on your wish list as potential buys – add to portfolio if needed
 - *Open PERT* for portfolio containing wish list stocks.
 - *Sort by %Total Return* (largest on top)
 - Pick out 2-3 stocks with acceptable risk and reward as potential buys
 - Add those stocks with zero shares to your portfolio, if needed
- Record ticker of all companies owned missing EPS estimates (magenta highlight) in TTM EPS % Chg in B1a.
 - *Sort by Company Name*
 - Record ticker of all holdings missing EPS estimates (magenta) in TTM EPS % Chg in B1a.
- Record opportunities to improve portfolio quality in the grey section at the end of section B. Record why each company listed missed earnings. Record if reason is (1) normal business cycle, (2) temporary, or (3) long-term in B2b.
 - Ex.
 - FFIV – temporary problem due to CEO replacement. Bottom of business cycle. Consider sell at average P/E. (Jan 2016)
 - LKQ – temporary problem due to high currency exchanges and metal prices. Top of business cycle. Consider selling for 24% profit today. (Feb 2016)
 - PII – temporary problem due to bad winter. Bottom was Jan 2016. Hold for good winter and PE about 25; or replace with more reliable company. (Feb 2016)

APPENDIX (cont.)

Step 4. Portfolio Valuation (Section C)

Buy Low with acceptable reward

- Record companies with TR > Portfolio %Total Return (see D2a) in C1a
 - *Open PERT, sort by %Total Return (Largest on top)*
 - Record tickers for companies with acceptable projected price appreciation in C1a
- Record tickers from the previous list with Projected P/E at or near est. low average P/E in C1b
 - Find and record each company with acceptable P/E expansion potential in C1b

Buy Low with acceptable risk

- Record tickers from the previous list with acceptable risk in C1c
 - Find and record each company where PEG < 1.5 and RV < 100 and U/D > 3 in C1

Buy Low with acceptable risk and reward

- Record tickers from the previous list as potential buys with acceptable and reward in C1d (“Meets all three buy criteria”)
 - Find and record each company that meeting the risk criteria in C1d

Sell High with unacceptable reward

- Record companies with TR < 10% (market) in C2a
 - *Open PERT, sort by %Total Return (Smallest on top)*
 - Record tickers for companies with unacceptable projected price appreciation in C2a
- Record tickers from the previous list with Projected P/E at or near est. high average P/E in C2b
 - Find and record each company with acceptable P/E expansion potential in C2b

Sell High with unacceptable risk (C2)

- Record tickers from the previous list with acceptable risk in C2c
 - Find and record each company where PEG > 1.5 and RV > 100 and U/D < 3 in C2c

Sell High with unacceptable risk and reward (C2)

- Record tickers from the previous list as potential buys with acceptable and reward (“Meets all three buy criteria”) in C2d
 - Find and record each company that meeting the risk criteria in C2d
- Itemize opportunities to improve portfolio valuation in grey box.
 - Record opportunities to improve valuation in the grey box at the end of section C.

Step 5. Performance (Section D)

- Record (realized gains) percent winners’ performance for current year in D1a
 - *Open Capital Gains Report from broker or club accounting software*
 - Count the number of lots sold year-to-date (YTD)
 - Count the number of lots with positive gains (>0).
 - % winners = #PositiveGains/#LotsSold
- Record (future gains) portfolio %Total Return in D2a (completed in step 1)

APPENDIX (cont.)

- Record (realized + unrealized) performance in D3a,b,c
 - *Open the Performance Benchmark report in club accounting software*
 - Record portfolio performance vs. market performance
 - Last 5-years in D3a
 - Last 3-years in D3b
 - Last 1-year in D3c

APPENDIX (cont.)

Sample Diversification Report

Report Options		Summary		PERT		Diversification		Report Details		Study data	
Sector & Industry Diversification Report		Sector		Industry		Security		PM Magic		% of Portfolio (Sector)	
Sector		Market Value (Security)		% of Portfolio (Security)		% of Portfolio (Industry)		% of Portfolio (Sector)			
\$CASH		\$1,303.36		2.6%		2.6%		2.6%		2.6%	
Consumer Cyclical		\$CASH		2.6%		2.6%		2.6%		34.8%	
<i>Internet Retail</i>		Alibaba Group Holdin		4.8%		4.8%		4.8%		4.8%	
<i>Apparel Retail</i>		TJX Companies		7.1%		7.1%		7.1%		7.1%	
<i>Specialty Retail</i>		Tractor Supply		10.9%		10.9%		10.9%		23.0%	
		Ulta Beauty		12.1%		12.1%		12.1%		12.1%	
Consumer Defensive										6.9%	
<i>Beverages - Wineries & Distilleries</i>										3.3%	
<i>Beverages - Non-Alcoholic</i>		Constellation Brands		3.3%		3.3%		3.3%		3.3%	
		Monster Beverage		3.6%		3.6%		3.6%		3.6%	
Financial Services										19.9%	
<i>Banks - Regional</i>										14.1%	
		Axos Financial		0%		0%		0%		0%	
		Bank OZK		4.3%		4.3%		4.3%		4.3%	
		Signature Bank		9.8%		9.8%		9.8%		9.8%	
<i>Credit Services</i>		Visa		5.8%		5.8%		5.8%		5.8%	
Healthcare										7.0%	
<i>Drug Manufacturers - General</i>										2.1%	
		Amgen		2.1%		2.1%		2.1%		2.1%	
<i>Healthcare Plans</i>		CVS Health		4.8%		4.8%		4.8%		4.8%	
Industrials										23.1%	
<i>Rental & Leasing Services</i>										21.8%	
		Air Lease		8.3%		8.3%		8.3%		8.3%	
		United Rentals		13.5%		13.5%		13.5%		13.5%	
<i>Airlines</i>		Southwest Airlines		1.3%		1.3%		1.3%		1.3%	
Technology										5.7%	
<i>Semiconductors</i>		Skyworks Solutions		5.7%		5.7%		5.7%		5.7%	
		Total		\$49,334.23		100.0%		100.0%		100.0%	

APPENDIX (cont.)

Sample - Portfolio Review

PORTFOLIO REVIEW		
A. Diversification = risk & reward mitigation	Goal	
1. Percentage by Size (% Small [Fast]/% Medium/%Large [Slow])	25%/50%/25%	4.4%/69.0%/26.6%
2. %Estimated Portfolio Growth Rate = %Est EPS + %Yield	~10%	11.0% + 1.0% = 12.0%
3. Number & Percent of Sectors (#/Largest Sector @ %)	Sector<30%	6/Consumer Cyclical 34.8%
4. Number & Percent of Stocks (#/Largest Stock @ %)	15-25/Stock<20%	17/URI @ 13.5%
5. Percent Cash	~5%	2.6%
Opportunities to improve the portfolio diversification: <ul style="list-style-type: none"> Increase small size while reducing medium. Avoid/reduce consumer cyclical 		
B. Quality = consistent & predictable growth		
1. Growth Estimates – PERT		
a. TTM EPS - Missed estimates	AL, AX, OZK, STZ, SWKS, LUV, TJX, ULTA	
Opportunities to improve the portfolio quality: <ul style="list-style-type: none"> AL (-35% vs 13%) Temporary downturn due to 737-max. AIRR = 9.4% (see Jan/Feb 2020 BI page 44 – First Cut). Undervalued. OZK (-2% vs 5%) – BANK. Fed reducing interest rates. Consider replacing OZK with a non-bank/higher growth small stock. STZ (-69% vs 9%) Temporary recovery due to premium price for Canadian cannabis. AIRR=8.8%. VL est EPS = 8.5%. TTM EPS = -69%. TTM Sales = 2%. Long term looks good. Short term poor. Replace for 2020? SWKS (-24% vs. 9%) Revenue guidance has dropped due to tariffs and Huawei ban. Stock is currently undervalued. SSG EPS dropped to 6% until temporary tariffs and ban are resolved. Quality remains despite high volatility. TJX (4% vs 11.5%) – AIRR=40.5%. Sell for profit?? Est hi PE=24. Current PE = 24.6. Proj PE=21.4. Increase est. hi PE? See www.bigcharts.com ULTA (10.4% vs. 11%) – close enough – normal business. 		
C. Value = Buy low; Sell high		
1. Current BUY LOW opportunities		
a. Stocks w/Total Return (TR) > 18.2% (see D2 below)	AL, ULTA, OZK, URI, STZ, AX, CVS, BABA	
b. Projected P/E at or near estimated low avg P/E	AL, ULTA, OZK, URI, AX, CVS, BABA	
c. PEG < 1.5 and RV < 100 and U/D > 3	AL, URI, AX, CVS, BABA	
d. Meets all three buy criteria	AL, URI, AX, CVS, BABA	
2. Current SELL HIGH opportunities		
a. Stocks w/Total Return (TR) < 10% (market)	V, LUV, TJX	
b. Projected P/E at or near estimated high avg P/E	V	
c. PEG > 1.5 and RV > 100 and U/D < 3	V, TJX	
d. Meets all sell criteria above	V	
Opportunities in improve portfolio valuation: <ul style="list-style-type: none"> Consider buying AL, URI, AX, CVS, BABA to improve risk and reward Consider selling V to improve risk and reward 		
D. Performance = Beat market and/or 15% real & unrealized returns	Goal	
1. History of buy low/sell high (Capital Gains Report)		
a. % winners > \$0 gain	80%+	60%
2. Portfolio Potential Return (Summary Report)		
a. %Total Return (TR)	15%+	18.2%
3. Investment Performance Report		
a. Last 5-years vs. Market	15%+	14.8% vs. 13.2%
b. Last 3-years vs. Market	15%+	12.8% vs. 11.5%
c. 1-year (TTM) vs. Market	15%+	-5.4% vs. 3.6%
Opportunities to improve portfolio performance: <ul style="list-style-type: none"> Pay closer attention to quality to reduce losses. Pay closer attention to selling high to maximize profits. 		
Consolidated portfolio recommendations: <ul style="list-style-type: none"> Increase small (AX) & reduce medium (SBNY, TSCO) positions while avoiding/selling consumer cyclical (TJX) Sell Visa (large financial) for profit Sell/replace OZK (small financial) with more AX (small financial) to improve quality 		

APPENDIX (cont.)

Portfolio Review Template

PORTFOLIO REVIEW		
A. Diversification = risk & reward mitigation	Goal	
1. Percentage by Size (% Small [Fast]/% Medium/%Large [Slow])	25%/50%/25%	
2. %Estimated Portfolio Growth Rate = %Est EPS + %Yield	~10%	
3. Number & Percent of Sectors (#/Largest Sector @ %)	3+/Sector<30%	
4. Number & Percent of Stocks (#/Largest Stock @ %)	15-25/Stock<20%	
5. Percent Cash	~5%	
Opportunities to improve the portfolio diversification: A1: Use Company Size Diversification Report A2: Sort PERT report by Est. EPS Growth to find median. Sort PERT report by Yield to find median. Add together for portfolio growth rate. A3: Use Diversification Report for %Sector. Manage risk with < 30% max for sectors. A4: Use Valuation Report for count and % portfolio. Manage company risk to < 20% max for any one stock. A5: Use Valuation Report. Keep cash to about 5% or less.		
B. Quality = consistent & predictable growth		
1. Growth Estimates – PERT		
a. TTM EPS - Missed estimates		
Opportunities to improve the portfolio quality: B1: Use the PERT TTM EPS to identify holdings missing our EPS growth estimates (TTM EPS = Magenta). - Reasons and trends for missed estimates - temporary or long-term?		
C. Value = Buy low; Sell high		
1. Current BUY LOW opportunities		
a. Stocks w/Total Return (TR) > nn.n% (see D2a below)		
b. Projected P/E at or near estimated low avg P/E		
c. PEG < 1.5 and RV < 100 and U/D > 3		
d. Meets all three buy criteria		
2. Current SELL HIGH opportunities		
a. Stocks w/Total Return (TR) < 10% (market)		
b. Projected P/E at or near estimated high avg P/E		
c. PEG > 1.5 and RV > 100 and U/D < 3		
d. Meets all sell criteria above		
C1&C2: Update and review your SSGs for all identified buys and sells.		
D. Performance = Beat market and/or 15% real & unrealized returns	Goal	
1. History of buy low/sell high (Capital Gains Report)		
a. % winners > \$0 gain	80%+	
2. Portfolio Potential Return (Summary Report)		
a. %Total Return (TR)	15%+	
3. Investment Performance Report		
a. Last 5-years vs. Market	15%+	
b. Last 3-years vs. Market	15%+	
c. 1-year (TTM) vs. Market	15%+	
Opportunities to improve performance: D1: Use Capital Gains and Losses report to calculate % winners > \$0 D2: Find %Total Return in Summary Report header (online SSG) or Portfolio Report Card (Toolkit 6). D3: Use club accounting's Investment Performance Report to calculate club vs. market performance.		
Consolidated portfolio recommendations: <ul style="list-style-type: none"> Combine opportunities into single list – addressing any conflicting opportunities 		

APPENDIX (cont.)

Sample PERT Report (PDF)

PM Magic :: PERT Report :: 1/28/2020

Company Name	Div	% Yield	Est EPS Nxt 12 Mo	EPS			Sales		Pre-Tax Profit			TTM EPS		Proj PE	Price	Proj RV	Proj 5Yr P/E Ratios			Est EPS Growth	PEG Ratio	U/D Ratio	% Total Return	Est 5 Years	
				Qtr End	\$	% Chg	Mill \$	% Chg	Mill \$	% Chg	% Sales	\$	% Chg				Hi	Avg	Low					Low Price	High Price
				09/19 09/18	3.92 1.12	250.3 % 1.12	16968.5 12517.3	35.6 % 1.12	12193.2 2537.9	380.4 % 1.12	71.9 % 20.3 %	8.39 3.48	141.0 % 1.12				205.47 1/27/2020	68.3	37.0					31.0	25.0
Alibaba Group Holding	0.00	0.0	9.70	09/19 09/18	3.92 1.12	250.3 % 1.12	16968.5 12517.3	35.6 % 1.12	12193.2 2537.9	380.4 % 1.12	71.9 % 20.3 %	8.39 3.48	141.0 % 1.12	21.2	205.47 1/27/2020	68.3	37.0	31.0	25.0	15.6	1.4	7.8	25.5	150.0	640.9
CVS Health	2.00	2.8	6.48	09/19 09/18	1.17 1.36	-14.0 % 1.36	64547.0 47269.0	36.6 % 1.36	2133.0 1899.0	12.3 % 1.36	3.3 % 4.0 %	5.89 1.56	277.6 % 1.36	11.0	70.97 1/27/2020	59.2	22.0	18.5	15.0	10.0	1.1	3.8	25.3	35.0	208.7
Axos Financial	0.00	0.0	2.96	09/19 09/18	0.66 0.58	13.8 % 0.58	122.8 102.8	19.5 % 0.58	56.7 49.3	15.0 % 0.58	46.1 % 47.9 %	2.57 2.45	4.9 % 0.58	9.5	27.96 1/27/2020	70.1	16.0	13.5	11.0	15.0	0.6	6.9	24.2	20.0	82.7
Constellation Brands	2.96	1.6	4.52	11/19 11/18	1.85 1.56	18.6 % 1.56	1999.4 1972.6	1.4 % 1.56	-292.4 347.4	-184.2 % 1.56	-14.6 % 17.6 %	4.15 13.33	-68.9 % 1.56	42.2	190.90 1/27/2020	228.1	22.0	18.5	15.0	9.0	4.7	8.4	24.0	150.0	534.0
United Rentals	0.00	0.0	16.69	09/19 09/18	5.08 4.01	26.7 % 4.01	2488.0 2116.0	17.6 % 4.01	510.0 460.0	10.9 % 4.01	20.5 % 21.7 %	14.51 11.78	23.2 % 4.01	8.8	146.27 1/27/2020	76.2	14.0	11.5	9.0	15.0	0.6	4.3	22.8	85.0	408.6
Bank OZK	0.80	2.9	3.59	09/19 09/18	0.81 0.58	39.7 % 0.58	243.6 242.6	0.4 % 0.58	136.5 99.8	36.7 % 0.58	56.0 % 41.2 %	3.42 3.49	-2.0 % 0.58	7.7	27.59 1/27/2020	61.4	15.0	12.5	10.0	5.1	1.5	5.0	20.8	20.0	65.8
Ulta Beauty	0.00	0.0	13.16	10/19 10/18	2.25 2.18	3.2 % 2.18	1682.5 1560.0	7.9 % 2.18	168.7 170.5	-1.1 % 2.18	10.0 % 10.9 %	11.86 10.74	10.4 % 2.18	20.8	273.70 1/27/2020	65.0	37.0	32.0	27.0	11.0	1.9	3.5	20.0	155.6	682.1
Air Lease	0.43	1.0	5.55	09/19 09/18	1.34 1.32	1.5 % 1.32	530.9 450.7	17.8 % 1.32	193.8 179.4	8.0 % 1.32	36.5 % 39.8 %	4.91 7.58	-35.2 % 1.32	8.0	44.35 1/27/2020	84.1	12.0	9.5	7.0	13.0	0.6	5.8	18.5	34.4	101.7
Signature Bank	1.12	0.8	12.27	09/19 09/18	2.75 2.84	-3.2 % 2.84	334.0 329.3	1.4 % 2.84	198.5 204.8	-3.0 % 2.84	59.4 % 62.2 %	11.05 8.41	31.4 % 2.84	11.8	145.01 1/27/2020	76.3	21.0	15.5	10.0	11.0	1.1	3.5	17.6	93.0	326.6
Tractor Supply	1.20	1.3	5.08	09/19 09/18	1.02 0.95	7.4 % 0.95	1984.1 1881.6	5.4 % 0.95	156.9 148.7	5.5 % 0.95	7.9 % 7.9 %	4.56 4.08	11.8 % 0.95	18.5	93.99 1/27/2020	86.1	25.0	21.5	18.0	11.3	1.6	4.2	16.5	70.0	194.7
Skyworks Solutions	1.58	1.4	5.21	12/19 12/18	1.50 1.60	-6.3 % 1.60	896.1 972.0	-7.8 % 1.60	278.7 323.8	-13.9 % 1.60	31.1 % 33.3 %	4.78 6.25	-23.5 % 1.60	22.4	116.88 1/27/2020	102.0	30.0	22.0	14.0	9.0	2.5	1.8	14.2	60.0	220.6

Sample PERT Report (Screen)

Report Options: Summary, PERT, Download

Report Details

Show All Indices

Search all columns

Company Name	Div	% Yield	Est EPS Nxt 12 Mo	Qtr End	\$	% Chg	Mill \$	% Chg	Mill \$	% Chg	% Sales	\$	% Chg	Proj PE	Price	Proj RV	Hi	Avg	Low	Est EPS Growth	PEG Ratio	U/D Ratio	% Total Return	Low Price	High Price
Alibaba Group Holding	0.00	0.0	9.70	09/19 09/18	3.92 1.12	250.3 % 1.12	16968.5 12517.3	35.6 % 1.12	12193.2 2537.9	380.4 % 1.12	71.9 % 20.3 %	8.39 3.48	141.0 % 1.12	21.2	205.47 1/27/2020	68.3	37.0	31.0	25.0	15.6	1.4	7.8	25.5	150.0	640.9
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Axos Financial	0.00	0.0	2.96	09/19 09/18	0.66 0.58	13.8 % 0.58	122.8 102.8	19.5 % 0.58	56.7 49.3	15.0 % 0.58	46.1 % 47.9 %	2.57 2.45	4.9 % 0.58	9.5	27.96 1/27/2020	70.1	16.0	13.5	11.0	15.0	0.6	6.9	24.2	20.0	82.7
Constellation Brands	2.96	1.6	4.52	11/19 11/18	1.85 1.56	18.6 % 1.56	1999.4 1972.6	1.4 % 1.56	-292.4 347.4	-184.2 % 1.56	-14.6 % 17.6 %	4.15 13.33	-68.9 % 1.56	42.2	190.90 1/27/2020	228.1	22.0	18.5	15.0	9.0	4.7	8.4	24.0	150.0	534.0
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Ulta Beauty	0.00	0.0	13.16	10/19 10/18	2.25 2.18	3.2 % 2.18	1682.5 1560.0	7.9 % 2.18	168.7 170.5	-1.1 % 2.18	10.0 % 10.9 %	11.86 10.74	10.4 % 2.18	20.8	273.70 1/27/2020	65.0	37.0	32.0	27.0	11.0	1.9	3.5	20.0	155.6	682.1
Air Lease	0.43	1.0	5.55	09/19 09/18	1.34 1.32	1.5 % 1.32	530.9 450.7	17.8 % 1.32	193.8 179.4	8.0 % 1.32	36.5 % 39.8 %	4.91 7.58	-35.2 % 1.32	8.0	44.35 1/27/2020	84.1	12.0	9.5	7.0	13.0	0.6	5.8	18.5	34.4	101.7
Signature Bank	1.12	0.8	12.27	09/19 09/18	2.75 2.84	-3.2 % 2.84	334.0 329.3	1.4 % 2.84	198.5 204.8	-3.0 % 2.84	59.4 % 62.2 %	11.05 8.41	31.4 % 2.84	11.8	145.01 1/27/2020	76.3	21.0	15.5	10.0	11.0	1.1	3.5	17.6	93.0	326.6
Tractor Supply	1.20	1.3	5.08	09/19 09/18	1.02 0.95	7.4 % 0.95	1984.1 1881.6	5.4 % 0.95	156.9 148.7	5.5 % 0.95	7.9 % 7.9 %	4.56 4.08	11.8 % 0.95	18.5	93.99 1/27/2020	86.1	25.0	21.5	18.0	11.3	1.6	4.2	16.5	70.0	194.7
Skyworks Solutions	1.58	1.4	5.21	12/19 12/18	1.50 1.60	-6.3 % 1.60	896.1 972.0	-7.8 % 1.60	278.7 323.8	-13.9 % 1.60	31.1 % 33.3 %	4.78 6.25	-23.5 % 1.60	22.4	116.88 1/27/2020	102.0	30.0	22.0	14.0	9.0	2.5	1.8	14.2	60.0	220.6

APPENDIX (cont.)

Sample – Valuation Report

Name	Shares Held	Cost Basis per Share	Total Cost Basis	Price per Share	Market Value	Unrealized Gain/(Loss)	Percent
Air Lease Corp (AL)	92.36	43.76	4,041.37	47.52	4,388.80	347.43	8.0%
Alibaba Group Holding Ltd (BABA)	16.28	190.41	3,100.00	212.10	3,453.13	353.13	6.3%
Bank OZK (OZK)	77.10	40.34	3,109.99	30.51	2,352.35	(757.64)	4.3%
Constellation Brands Inc (STZ)	8.59	177.50	1,525.44	189.75	1,630.71	105.27	3.0%
Cvs Health Corp (CVS)	33.43	80.04	2,675.51	74.29	2,483.28	(192.23)	4.5%
Facebook Inc (FB)	16.88	177.72	3,000.00	205.25	3,464.67	464.67	6.3%
LKQ Corp (LKQ)	76.71	28.68	2,200.00	35.70	2,738.66	538.66	5.0%
Monster Bev Corp (MNST)	26.65	56.29	1,500.00	63.55	1,693.61	193.61	3.1%
Signature Bank (SBNY)	33.44	126.27	4,222.56	136.61	4,568.17	345.61	8.3%
Skyworks Solution (SWKS)	24.07	86.31	2,077.49	120.88	2,909.70	832.21	5.3%
Southwest Airlines Co (LUV)	11.41	53.44	609.50	53.98	615.67	6.17	1.1%
TJX Companies Inc (TJX)	57.16	52.87	3,021.62	61.06	3,489.99	468.37	6.3%
Tractor Supply Co (TSCO)	38.01	67.78	2,576.11	93.44	3,551.24	975.13	6.5%
Ulta Beauty Inc (ULTA)	21.76	221.74	4,826.27	253.14	5,509.59	683.32	10.0%
United Rentals Inc (URI)	45.42	144.20	6,550.00	166.77	7,575.25	1,025.25	13.8%
VISA Inc (V)	14.15	73.68	1,042.88	187.90	2,659.65	1,616.77	4.8%
			46,078.74		53,084.47	7,005.73	96.5%
Name			Total Cost Ba		Market Value	Unrealized G	Percent
Folio Investing			1,909.39		1,909.39	-	3.5%
			1,909.39		1,909.39	-	3.5%
Total Securities and Cash Accounts			47,988.13		54,993.86	7,005.73	100.0%

APPENDIX (cont.)

Tools and Resources

Downloadable templates are available from a public share on Google Drive (<https://tinyurl.com/we6ijwk>) If you have a question or feedback, please email me at mike@torbenson.org. Not all tools and resources below are downloadable – look for “(downloadable)” at the end of each description. Forms and spreadsheets are normally saved as Word or Excel templates. When templates are opened the document or workbook is opened with a default name, like a new document, which requires you to save with a new filename the first time you save the document. That keeps the template without change and allows you to start a new template any time needed.

Benchmark Performance Report is provided by club accounting services and is used to calculate your portfolio performance against a market index. This report is used to determine how the portfolio is performing against the market and result is recorded in section D of the Portfolio Review. See *Portfolio Management Magic*, Chapter 5 Performance, Portfolio vs. Market, for usage.

BigCharts.com is a free price charting website that provides the ability to display price, P/E, and rolling EPS at the same time. While working on an SSG, the “Research” menu from Online SSG and the Web menu from Toolkit both provide a direct link to BigCharts and structures the request to immediately pull up the company you are working on. To optimize your use of BigCharts, bring up the site once and configure using the following options:

- Enter any symbol to chart
- Select the “Advanced Chart” button
- Set time frame (on left) to “5 years”
- If needed open “indicators”
- Set Lower Indicator 1: to “P/E Ratio”
- Set Lower Indicator 2: to “Rolling EPS”
- If needed, open “chart style”
- set Chart Size: to “Big”
- Select the “Store Chart Settings” link below your advanced settings on select “OK”

See *Stock Selection Guide Magic*, Chapter 7 Valuation, Estimating high and low P/E for usage. See *Portfolio Management Magic*, Chapter 3 Quality, Researching quality problems, for usage.

Business Model (Preferred Procedure) is spreadsheet that duplicated the Preferred Procedure calculator in both SSG tools with the added feature of allowing you to enter a high and low estimated for each judgement providing you a range rather than a single result (downloadable). See *Stock Selection Guide Magic*, Chapter 5 Forecasting Growth – Business Modelling, Business Model (Preferred Procedure), for usage.

The screenshot shows the 'Advanced Chart' settings page for the symbol 'CTSH'. The interface is dark-themed with white text. It includes several sections for configuration:

- time frame**: Time is set to '5 years' and Frequency is set to 'Daily'.
- compare to**: This section is currently collapsed.
- indicators**: Moving Average is set to '<None>' with a value of '9'. Upper Indicators is set to '<None>'. Lower Indicator 1 is set to 'P/E Ratio'. Lower Indicator 2 is set to 'Rolling EPS'. Lower Indicator 3 is set to '<None>'.
- chart style**: Price Display is set to 'OHLC'. Chart Background is set to 'Default'. Chart Size is set to 'Big'.

At the bottom, there are two buttons: 'DRAW CHART' and 'Store Chart Settings / Clear Chart Settings'.

APPENDIX (cont.)

Club Accounting Software is available for clubs from two accounting services: ICLUB.com and Bivio.com. Each provides the reports needed for a Portfolio Review as described in *Portfolio Management Magic*, except only Bivio.com includes a Lot Valuation. However, that report/information will be available from your broker. See *Portfolio Management Magic*, Chapter 1 Overview, for usage.

Portfolio Review Checklist is provided as an appendix to *Portfolio Management Magic*. As you develop your own Portfolio Review process you may want to modify this to reflect your unique style (downloadable). See *Portfolio Management Magic*, Chapter 1 Overview, for usage.

Portfolio Review Report is a form created in Word used to record the attributes of your portfolio review in *Portfolio Management Magic* and used to manage your portfolio (downloadable). See *Portfolio Management Magic*, Appendix, Sample – Portfolio Review, for a usage example.

Realized Returns for Bivio is used with the Capital Gains Report from Bivio to calculate various performance measures which are recorded in the Portfolio Review Report, section D (downloadable). See *Portfolio Management Magic*, Chapter 5 Performance, Realized returns, for usage.

Revenue Analysis is a spreadsheet provided to help you analyze revenue by product and geography as described in *Stock Select Guide Magic* (downloadable). See *Stock Selection Guide Magic*, Chapter 4 Forecasting Growth using Revenue Analysis, Revenue Segments, for usage.

Stock Study Guide software is available in a desktop version, Toolkit from ICLUB.com, and as a web tool, Online SSG, from BetterInvesting.org. The web tool is expected to replace the desktop version in the future but for now, both have their advantages and disadvantages. New BetterInvesting members are encouraged to use the web site. Some clubs (and die-hards) continue to use Toolkit until BetterInvesting has finished replicated Toolkit features in the Online SSG and makes the decision to stop servicing Toolkit; forcing users to move to the newer tool.

Valuation reports are used to understand how much we have. Valuation by Company is considered the default if someone asks for a “Valuation Report”. Valuation by Company is provided by the club accounting service and your broker. The Valuation by Member lists the share ownership by each club partner. This report is provided only by a club accounting service. See *Portfolio Management Magic*, Chapter 1 Overview and Chapter 6 Buy/Sell Decisions – The Monthly Meeting, for usage.

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