

STOCK INVESTING STRATEGIES



Maria Crawford Scott
Editor, AAIJ Journal

John Bajkowski
Editor, Computerized Investing
Vice President, Financial Analysis

Chapter 1: The Basic Process Used in Fundamental Analysis.....	1
The Basic Process	1
Applying the Basic Approach.....	4
Chapter 2: A Simple Worksheet for Evaluating Stocks.....	6
Filling in the Numbers	8
The Financial Checklist.....	9
Communications Inc.: An Example	10
Conclusion	11
Chapter 3: Sources of Information for the Simplified Approach	12
Per Share Data	12
Problems You May Encounter	15
Growth Rates and Estimates	15
Industry Information.....	17
Appendix A: Using a Computer for Fundamental Analysis	18
Fundamental Screening	18
Flexibility	19
Distribution of Data.....	19
Computerized Investing Tips	19
Chapter 4: Using the Dividend-Yield Approach to Investing	21
Developing the Initial Lists	21
Pharmaceuticals Inc.: An Example.....	23
A Tour Through the Worksheet: Per Share Information	24
Looking at the Financial Ratios	24
Valuing the Company	27
Conclusion	27
Appendix B: Screening for Stocks Using a Dividend-Yield Approach	28
The Dividend-Yield Strategy.....	28
Applying the Screens	29
The Results.....	30

Chapter 5: A Basic Strategy for Growth Stock Investing.....	33
Company Characteristics.....	33
The Initial List	33
Toy Retailer Inc.: An Example.....	35
A Tour Through the Worksheet: Per Share Information	37
Looking at the Financial Ratios	37
Valuing the Company	38
Conclusion	38
Appendix C: Screening Stocks With High Growth Potential	40
Screening for Growth	40
Secondary Growth Screens.....	41
Viewing the Results	41
Chapter 6: Investing in Utilities for Income and Growth	45
Company Characteristics.....	45
The Initial List	46
Utility Corp.: An Example	46
Per Share Information	48
Looking at the Financial Ratios	48
Valuing the Company	50
Conclusion	50
Appendix D: Screening Utility Stocks.....	52
Chapter 7: Investing in Low P/E Stocks.....	57
Stock Characteristics	57
The Initial List	59
Auto Corp.: An Example	59
A Tour Through the Worksheet: Per Share Information	60
Looking at the Financial Ratios	60
Valuing the Company	62
Conclusion	63
Appendix E: Using Low P/E Screens to Find Undervalued Stocks.....	64
Using Historical Averages	65
Price-Earnings Relative Models.....	71
Conclusion	71
Chapter 8: Using Analysts' Estimates to Your Advantage.....	73
Stock Characteristics	73
The Initial List	73

Manufacturing Industries: An Example.....	75
Per Share Information	75
Looking at the Financial Ratios	76
Valuing the Company	76
Conclusion	78
Appendix F: Analyzing Earnings Revisions	79
Chapter 9: Finding Stocks With Winning Characteristics	85
Winning Characteristics.....	85
The Initial List	86
Aerospace Inc.: An Example	87
Per Share Data and Financial Ratios	87
Valuing the Company	88
Conclusion	90
Appendix G: Applying the Rules for Stock Market Winners	91
Low Price to Book Value.....	91
Earnings Momentum	92
Minimum Fundamentals.....	93
Price Momentum	93
Limited Float	95
Conclusion	95
Chapter 10: Adapting the Lynch Principles to the Basic Approach.....	97
The Lynch Principles.....	97
Technology Corp.: An Example.....	99
Per Share Info & Financial Ratios.....	99
Valuing the Company	102
Conclusion	102
Appendix H: Stock Screening à la Peter Lynch	103
Lynch's Laws.....	103
Applying the Lynch Screen	105
Conclusion	108
Additional Resources on AAIL.com.....	110



The Basic Process Used in Fundamental Analysis

One of the biggest difficulties for individuals interested in investing in stocks is getting started. Many books have been written about each and every aspect of fundamental stock analysis. These books walk investors through the fine details of corporate financial statements, comparative financial ratios, all kinds of stock screens and every imaginable valuation model. The detail and complexity often leaves newcomers perplexed, wondering: Where do I begin, what is important, and how do I apply it to my situation?

In this book, we will provide a general outline for analyzing stocks and walk through the process as it is practically applied to specific types of investment approaches. To achieve this without getting bogged down in details, we will use a somewhat simplistic approach; from that base, you can build up your knowledge of the details, because in the real-world marketplace, you will be competing with those who know all of the details. In the end, you should have a general understanding of fundamental stock analysis and its practical application.

We will first describe, in very broad terms, the basic process that is followed in fundamental analysis. Then we will go into the various steps in more detail and show how they can be adapted and practically applied to an individual's specific approach using commonly found information sources. Most chapters will have an accompanying appendix that more fully explains the screen and the problems you might run into when applying it to a large database using a computer. Appendix A describes the uses of a computer in fundamental analysis and screening, and lists the popular software programs designed for these purposes.

THE BASIC PROCESS

When buying a stock, an investor faces the same question that the purchaser of any good faces: Is this good worth the price being asked? Judging the worth or value of a stock is the basic aim of stock analysis. And to reach this aim using a fundamental approach, stock analysis follows this basic process:

- Since it isn't practical to judge the worth of every single stock in existence, you must start with a limited list of stocks that are promising investment candidates. How do you come up with this list? You might simply start with one or several stocks that someone has recommended or that for one reason or another piqued your interest. A more methodical approach is to start with a list of stocks that have met certain

Fundamental Stock Analysis: The Basic Process



Initial investment criteria and stock screening: Developing a list of promising candidates using criteria based on return needs, risk tolerance and investment philosophy. Defines your overall investment approach.

Financial statement and ratio analysis: Gathering information on and analyzing the financial condition of a company and its ability to produce earnings to help form reasonable expectations concerning the company's financial future.

Stock valuation: Determining what you feel the stock is worth considering the potential for future price appreciation and dividends.

Final decision: Deciding whether to buy the stock based on your determination of the stock's value relative to the current market price.

criteria you set.


- Once you have a manageable-sized list to work with, you must gather information on and analyze the financial condition of the companies on the list.
- The analysis of the firm's financial condition allows you to form expectations concerning its future; based on these expectations, you can put a price on the stock—the amount you feel the stock is worth.
- Your final decision is based on how your estimated valuation compares with the current price of the stock. Your final decision may also be tempered by how confident you are with the information you have received, your analysis, and your expectations.

This short outline, described in layman's terms, is reasonable, logical, and easier said than done.

Let's look at a more formal description of the outline using investment terms for the steps of the process. Not only will this help you better understand the process, it may also help you identify areas you have read about or learned previously but were unclear as to where they fit in the overall stock analysis process.

Initial investment criteria and stock screening: *Developing a list of promising candidates.* Aside from relying on recommendations, the primary method investors use to develop their initial manageable list of promising stocks is to concentrate on stocks with certain fundamental attributes.

Stock screens are simply criteria that are applied to a broad universe of stocks; the investor can then focus on the narrower list of stocks that pass the criteria. Screening



involves scanning through a large universe of stocks, which is done easiest on a computer. Investors who don't use computers can use pre-screened lists that are available or they can develop criteria that stocks must meet before they are considered as candidates.

Obviously, the criteria by which stocks are initially selected are crucial. For the most part, these criteria will be based on your return objectives, tolerance for risk, and investment philosophy. Return objectives encompass not only the total return, but also how those returns are achieved—whether solely from price appreciation or a combination of price appreciation and dividend income. Risk tolerance refers to how much volatility of return you can tolerate without panicking. And investment philosophy encompasses the style used to select stocks; it is based in large part on your beliefs as to what drives stock prices. For instance, an investor with a tolerance for greater risk and few income needs may choose criteria that allow him to focus on growth-oriented companies, while an investor with a need for some income and less tolerance for risk may concentrate on stocks with higher dividends and lower price volatility, focusing on utilities with above-average dividend growth rates. This defines your overall investment approach.

Financial statement and ratio analysis: Gathering information on and analyzing the financial condition of a company. Fundamental analysis is premised on the notion that the value or worth of a stock is based in large part on expectations concerning the future performance of the company. Since most investors lack a crystal ball, expectations are derived from a study of the past and current financial condition of the company and its ability to produce earnings.

Corporate financial statements are a key source for evaluating a company's financial condition. However, it's difficult to draw conclusions based solely on the raw numbers—learning that XYZ had net earnings of \$19 million last year doesn't add much to an understanding of the firm.

Ratio analysis is the method by which information from the various financial statement accounts can be assessed. Financial ratios are computed from selected information in the annual financial statements; examples that you may be familiar with already include the current ratio (current assets divided by current liabilities, a measure of the firm's ability to meet short-term obligations and operating expenses); return on equity (net profit after taxes divided by stockholders' equity, a measure of profitability); and price-earnings ratio (market price divided by earnings per share, a measure of how the market is currently pricing the stock).

A firm's financial ratios are compared to its historical ratios as well as industry ratios. Comparing financial ratios to historical ratios helps identify important trends, while comparing financial ratios to industry averages allows investors to see how the firm stacks up to competitors. This analysis allows investors to form judgments of the company upon which reasonable expectations can be built.

Stock valuation: Determining what you feel the stock is worth. The goal of stock analysis is to determine a stock value that can be compared to the current market price. Stock valuation is aimed at formulating expectations about the company's future prospects

and the potential risk and return behavior of the stock, and converting these expectations into a dollar value through the use of the proper valuation formula.

In practical terms, a stock's risk and return potential is based on expectations of earnings, dividends, cash flow, and asset values. While each of these is interrelated and interdependent, most valuation formulas usually concentrate on one variable. For the individual investor, valuation formulas based on assets or cash flows are impractical because it is difficult to obtain and analyze meaningful data. Information on earnings and dividends, however, is more readily available and presents the most practical base to build upon.

If all companies had similar financial conditions and operated in similar environments, an investor could use one valuation formula in every situation. However, all companies are not similar. They differ in factors such as their stages of development, competitive nature, and industry; certain valuation models are more appropriate for certain firms than they are for others. Stock valuation requires investor judgment at many levels, from determining which valuation models are appropriate for a particular firm, to determining the most reasonable assumptions to use in the formulas such as, should future growth expectations be based on a firm's expected dividend, sales or earnings growth?

The actual decision. Your final decision to invest in a stock will be based on a comparison of the stock's current market price to the value you have placed on the stock. And whether your decision was a good one is obviously dependent on all of the inputs—how promising your initial list was, how accurate the information you compiled on the firm was, how reasonable the assumptions and expectations you developed and used in your valuation formulas were, and whether or not you used appropriate assumptions and formulas in your analysis.

APPLYING THE BASIC APPROACH

How do you apply this process?

As we have seen, determining the initial selection criteria depends heavily on an individual's investment philosophy, risk tolerance and return needs—an individual's overall investment approach. But it's difficult to develop an approach without an understanding of what drives stock prices and valuations.

For that reason, we will take a look at a very basic financial statement, ratio analysis and stock valuation form, to help give you a feel for the driving forces behind stock prices. Then we will look at the various investment approaches, the types of investors who may be drawn to these approaches, and the risk, return and other characteristics of stocks that are initially selected using these approaches. Later chapters will apply that basic form to various investment approaches, discussing which screens or criteria can be applied to draw up an initial list, which financial ratios should be emphasized, which valuation methods are most appropriate, sources of information, and special factors that should be taken into consideration. And we will walk you step-by-step through each approach using real-world examples. Although the names of these companies are ficti-



tious, the actual analyses used real companies with real numbers.

This book won't turn you into a financial analyst, but it should give you a foundation upon which to build a practical stock portfolio.



A Simple Worksheet for Evaluating Stocks

Stock selection requires you to gather and analyze data and information in a systematic way. The task of selecting stocks is made easier by organizing the decision process to ensure that salient data and information is evaluated in some logical sequence that allows an investor to make a reasonable decision. The ultimate goal is to determine, through a range of values, what you think the stock is really worth. Let's run through a simplified version of the process, just to get an idea of what occurs.

The accompanying worksheet provides an easy-to-follow format that allows you to walk through the complete process without getting bogged down in complicated financial analysis. However, any final real-world decision would include the further evaluation of other fundamental aspects of the company.

At the bottom of the worksheet, two valuation models are presented, one based on a firm's earnings and the other on its dividends. The two formulas look different, but they are actually quite similar except for the use of earnings in one and dividends in the other. They equate a stock's price to a stream of future earnings or dividends by asking the question: How much are investors paying for this expected stream?

Both models assume that the growth prospects of the firm have not changed fundamentally over time. The historical relationships between the stock's price and earnings or dividends per share can be used to estimate future value. Then, if current market prices differ significantly from the estimated values based on the historical relationships, it means the market, for whatever reason, is evaluating future income potential differently and may be mispricing the security.

The first approach is for stocks with low or non-existent dividends—the traditional growth stock—and is a price-earnings ratio approach. The price-earnings ratio—share price divided by earnings per share—indicates how much investors are willing to pay for each dollar of the firm's earnings. The higher the ratio, the more investors are paying for earnings, with the expectation that those earnings will increase, or the more confident they are of earnings predictions. Conversely, lower ratios indicate low earnings expectations or a low confidence in earnings predictability.

For the earnings valuation, the average annual high and low price-earnings ratios are calculated for prior years. Multiplying these historical ranges by an estimate of next year's earnings per share provides an estimate of future value.

While it may seem difficult to make an earnings estimate, the recent earnings history

Click here for a downloadable Excel spreadsheet version of this worksheet.

Valuation Worksheet

Company _____ Current Price \$ _____ Date (/ /)

Ticker _____ Exchange _____ Current P/E _____ Current Yield _____

Financial Statement & Ratio Analysis

Per Share Information	Company						Industry or Competitor	Market
	<i>Use Year 1 for oldest data, Year 5 for the most recent data.</i>						5-Year Avg	Year 5
	Year 1 20__	Year 2 20__	Year 3 20__	Year 4 20__	Year 5 20__	5-Year Avg		
Price: High								
Price: Low								
Earnings per Share (EPS)						<i>growth rate:</i>		
Dividends per Share (DPS)						<i>growth rate:</i>		
Book Value per Share (BV)								
Financial Ratios								
Price-Earnings Ratio (P/E): Avg*								
High (<i>High Price ÷ EPS</i>)								
Low (<i>Low Price ÷ EPS</i>)								
Dividend Yield % (DY): Avg*								
High (<i>DPS ÷ Low Price</i>)								
Low (<i>DPS ÷ High Price</i>)								
Payout Ratio % (DPS ÷ EPS)								
Return on Equity % (EPS ÷ BV)								
Financial Leverage %								

*Avg = (High + Low) ÷ 2

Shaded areas do not need to be filled in.

Valuation Estimates

Model based on earnings:

Average high P/E × estimated Year 6 EPS: _____ × _____ = _____ (high valuation estimate)

Average low P/E × estimated Year 6 EPS: _____ × _____ = _____ (low valuation estimate)

Model based on dividends:

Estimated Year 6 annual DPS ÷ average low DY***: _____ ÷ _____ = _____ (high valuation estimate)

Estimated Year 6 annual DPS ÷ average high DY***: _____ ÷ _____ = _____ (low valuation estimate)

**Use decimal form for DY. For instance 5.4% would be 0.054.

that is part of the worksheet will give you some basis for forming those expectations. In addition, there are a number of sources where you can obtain analysts' estimates of future earnings, including Value Line and Standard & Poor's. [We will provide a more extensive listing of information sources in the next chapter.]

The second approach is primarily for mature, dividend-paying stocks, such as public utilities, which are generally low-growth stocks. It is a dividend-yield approach. Dividend yield—dividends per share divided by share price—is the dividend as a percentage of the stock price. It relates share price to dividends: the *lower* the dividend yield, the greater the emphasis on earnings growth and disregard for dividend income. The *higher* the dividend yield, the lower the expectation of earnings growth and the greater the emphasis on dividend income. At the extreme, a high dividend yield may indicate the expectation of a dividend decrease.

This approach requires an estimate of the next expected annual cash dividend. Again, the recent dividend history in the worksheet should provide you with a feel for changes over time, or you can use analysts' estimates.

Dividing the expected annual dividend by the average low dividend yield will give a high-price estimate; dividing the expected annual dividend by the average high dividend yield results in the low-price estimate.

FILLING IN THE NUMBERS

To work through the equations at the bottom of the worksheet, you need to fill out the top section. This section—Financial Statement & Ratio Analysis—collects the information needed in the valuation models and also provides figures that will serve as a financial checklist. This financial checklist helps analyze the assumptions upon which the model is based, since if these assumptions are incorrect, your valuations are invalid.

The figures and ratios you fill in here can be gathered using a company's financial statements, which means you will have to calculate many of the ratios yourself. A better bet, particularly for a beginner, is to use one of the various stock information sources that do much of the legwork for you.

The first section indicates per share information concerning the stock: the high and low share prices for the last five years, as well as earnings per share and dividends per share for each of the last five years (numbers are entered left to right, with the Year 1 column containing the oldest figures and Year 5 the most recent). For the earnings per share and dividends per share figure, it is also useful to determine the five-year growth rate. We will discuss how this can be calculated later. This growth rate can then be used to develop your own estimate of next year's earnings and dividends.

The next section lists financial ratios; here, the two primary ratios we are focusing on are the price-earnings ratio and dividend yield. For this model, these two figures should be calculated from the per share data: for price-earnings ratios, divide the high and low share price by the earnings per share; for dividend yield, divide the annual cash dividends by the low and high price. Averages are obtained by adding the yearly figures and dividing by the number of years with valid figures. Note that if earnings are negative or

dividends nonexistent, you will be unable to calculate a figure for that year.

Also listed in this form is the payout ratio (dividends per share divided by earnings per share); return on equity (earnings per share divided by book value per share), and financial leverage [such as long-term debt to capitalization (long-term debt plus equity) or long-term debt to equity], which are used as part of your financial checklist. Most of these ratios can be calculated from the per share financial data in this worksheet, or they can be taken from the stock information sources. Financial leverage cannot be calculated by the per share data in this worksheet and the various sources use different measures. For these reasons, it is important to stick to one information source when making comparisons.

Financial ratios for the industry in which the firm operates (or a close competitor) as well as for the market as a whole are listed as part of the checklist.

THE FINANCIAL CHECKLIST

It's easy to compare the valuations you come up with to the current market price. But those valuations are only as good as the inputs and assumptions used in formulating the models.

For instance, the models assume that the firm's growth prospects have not fundamentally changed. But will growth continue at its current pace? The models also assume that historical relationships will continue. But were past relationships affected by a one-time occurrence that is unlikely to continue? Will dividends continue to be paid at the same rate?

Examining the historical patterns of the per share figures and ratios and comparing them to competitors and to industry and market benchmarks is particularly useful in evaluating your inputs and assumptions.

What do you look for and compare? In the simple worksheet presented here, answering the following questions would be appropriate:

- Have earnings grown at a stable rate?
- Have the earnings per share been steady and positive each year, or have they been volatile, making predictions more difficult?
- For dividend-paying firms, has the payout ratio been steady? Increases in the payout ratio, and payout ratios above 100% are an indication that future dividends may go down; high payout ratios mean slower or no dividend growth and perhaps even a decline.
- Is the current price-earnings ratio low relative to the market and industry or a competitor, and does this vary from previous years?
- Is the current dividend yield high relative to the market and industry or a competitor, and does this vary from previous years?
- Has the return on equity, a measure of financial return that provides an indication of how well the firm has used reinvested earnings to generate additional earnings, been high and stable?
- Is the use of financial leverage, a measure of financial risk that indicates how much of

the assets of the firm have been financed by debt, low relative to industry norms?

COMMUNICATIONS INC.: AN EXAMPLE

An example using Communications Inc., with information reported by Value Line, helps illustrate the use of this simple worksheet. The per share information is presented below, along with some selected ratios.

If you plug these numbers into the worksheet, you will see that the price-earnings ratio model determines a high price of \$49.83, a low price of \$38.94 and an average price of \$44.38, while the dividend model produces a high of \$43.91, a low of \$34.83 and an average price of \$39.37. [You may end up with slightly different numbers due to rounding.] The current price is around \$44: It's trading within the predicted range of the price-earnings model, but just above the range for the yield-based model.

Are the assumptions and figures used in the model reasonable? A run through the checklist evaluates this:

- Yearly earnings per share appear to be increasing in a fairly stable pattern (except for Year 2), and all of the figures were positive. Value Line's estimate for next year

Communications Inc.: An Example

	Year 1	Year 2	Year 3	Year 4	Year 5
Price: High (\$)	34.9	34.9	37.0	45.6	43.1
Price: Low (\$)	26.3	27.9	28.1	35.1	36.3
EPS (\$)	2.37	2.32	2.51	2.67	3.07
DPS (\$)	1.61	1.72	1.78	1.86	1.94
BV (\$)	14.63	15.18	12.94	14.35	10.98

Estimated Year 6 EPS: \$3.30

Estimated Year 6 DPS: \$2.00

Financial Ratios	Communications Inc.		Industry	
	Year 5	5-Yr Avg	Year 5	5-Yr Avg
Price-Earnings Ratio (x)	13.2	13.4*	13.9	14.8
Dividend Yield (%)	4.8	5.2*	4.9	4.7
Payout Ratio (%)	63	69	66	69
Return on Equity (%)	28	19.5	20.4	16.5
Long-Term Debt to Capitalization (%)	42.3	38.7	44.7	44.2

** An average of the 5-year high and 5-year low.*

Source: Value Line.

(Year 6), however, shows a smaller percentage increase than in the previous year. Further analysis—and understanding Value Line’s reasons for this change—would be useful to determine whether or not you agree with Value Line’s assessment.

- Communications Inc.’s payout ratio has generally decreased over time and is now below that of the industry. This should enable Communications Inc. to support its dividend payout or even increase the payout if earnings continue to grow.
- Communications Inc.’s price-earnings ratio is low compared to its industry. Its dividend yield is roughly equal to the industry average. Who are those competitors? In the Value Line industry comparisons, many are high-flying cellular stocks, which tend to be higher growth and higher price-earnings ratios.
- Communications Inc.’s return on equity has been stable and increasing and currently exceeds its industry norm. However, Communications Inc.’s long-term debt ratio (Value Line’s measure of financial leverage) has increased recently. Fortunately it is slightly lower than the industry average. Companies can boost return on equity by taking on more debt, but they increase their risk to shareholders in the process.

The financial checklist indicates that some of the assumptions in the model are reasonable, but some—such as the Value Line assumptions concerning dividend and earnings growth—should be examined in more detail. A lower Year 6 earnings per share estimate would, of course, produce lower valuation estimates.

CONCLUSION

For this particular company, your search may stop here. For stocks that appear more promising, however, you would need to look at other fundamental aspects of the company before any investment decision is made.

For a simple beginning, the worksheet will provide you with an easy-to-follow approach to determining value. The basic format is to:

- Determine which valuation model best suits your needs.
- Determine what information you need to gather for those valuations.
- Determine what information you need to evaluate the assumptions and other inputs used in the models.

Clearly, your information sources play a critical role in the analysis. We will take a closer look at sources of information, and some of the problems and differences you may encounter when using them.



Sources of Information for the Simplified Approach

In the previous chapter, we presented a simplified version of the valuation process, along with a worksheet with two valuation models, one based on a firm's earnings and the other on its dividends. The worksheet provides a systematic approach to gathering information needed for the valuations.

Clearly, the information sources play a critical role in the analysis. Let's take a closer look at sources of information and some of the problems and differences you may encounter when using them.

PER SHARE DATA

Most of the information in a worksheet can be derived from the per share financial information detailed at the top of the worksheet. This consists of, for each of the last five years: high and low share prices, earnings per share, dividends per share and book value per share.

The primary source for the per share information is the firm's annual financial reports. Corporate annual reports will include both summary and detailed financial statements, although even more detailed financial statements are available in a separate report, the 10-K. Both of these reports can be requested from the company.

The detailed financial reports include the standard balance sheets for the last two years listing company assets, liabilities, and shareholder equity; income statements for the last three years listing items such as revenue, expenses, dividend payments, and earnings; statements of shareholders' equity for the last three years, which tracks the flow of funds into and out of shareholders' equity including retained earnings and proceeds from new stock issued or stock option plans; and cash flow statements for the last three years, which examine increases or decreases in cash based on company operations, investing activities, and financial activities.

Also included in the detailed reports—and highly important—are the notes that accompany the statements. The notes will address factors such as whether there were any changes in accounting policies that may impact the statements; a breakdown of inventory; depreciation schedules for property, plant, and equipment; terms of capital leases; detailed tax expense reports; litigations; material business changes such as acquisitions, investments, and major commitments with other companies; and even a detailed breakdown of long-term debt.

Sources for Corporate Financial Information

Obtaining Corporate Reports

Securities and Exchange Commission

100 F St., N.E.
Washington D.C. 20549
(202) 942-8088
www.sec.gov

All publicly traded firms must file quarterly and annual reports with the SEC. An electronic database of this information is available for free at the SEC Web site.

Contacting the Company

Contact a company's Investor Relations department to request quarterly and annual reports.

Outside Sources of Information

Mergent's Handbook of Common Stock

Mergent Inc.
580 Kingsley Park Dr.
Fort Mill, S.C. 29715
(800) 342-5647
www.mergent.com
Analyzes about 900 common stocks; presents 10

years of data. Also includes industry information.

Standard & Poor's Stock Reports

55 Water St.
New York, N.Y. 10041
(800) 921-5277
www.standardandpoors.com
Company reports on approximately 5,000 NYSE, American and NASDAQ stocks; presents 10 years of data.

Value Line Investment Survey

220 E. 42nd St.
New York, N.Y. 10017-5891
(800) 634-3583
www.valueline.com
Analyzes approximately 1,700 common stocks and 97 industries; presents 15 years of data. Also includes industry information.

AAll.com

Web sites that offer in-depth company data on-line can be found at AAll.com in the Top Web Sites Guide found in the AAll Guides area. Click on Top Web Sites in the lower right corner, then Stock Data.

The annual report will also include a summary table that could prove useful in filling out the valuation worksheet. These tables often cover a five- or 10-year span and may include basic data such as earnings per share, dividends per share, and book value per share. Some annual reports will also list historical high and low stock prices. However, there is no consistent format for these tables, and the amount of information provided varies from firm to firm.

Investors should always closely examine corporate financial reports. However, because of accounting differences and other consistency problems, it can be difficult to compare the data from one company's financial report to that of another. A better bet for the beginner is to use one of the various information sources that do much of the legwork and adjustments for you. You can then refer to the corporate financial reports to doublecheck these sources and answer questions that might arise from the data they present.

The information sources presented above provide extensive information on the companies covered; while there are other sources of piecemeal information, the ones listed should present you with enough basic information to complete the simplified valuation worksheet.

Sources of Earnings Estimates

**Standard & Poor's Earnings Guide
Standard & Poor's Stock
Reports
Standard & Poor's Outlook**
55 Water St.
New York, N.Y. 10041
(800) 221-5277
www.standardandpoors.com

Thomson I/B/E/S and First Call
195 Broadway
New York, N.Y. 10007
(800) 782-5555
www.firstcall.com

Value Line Investment Survey
220 E. 42nd St.
New York, N.Y. 10017-5891
(800) 634-3583
www.valueline.com

Zacks Investment Research
111 N. Canal St., Suite 1101
Chicago, Ill. 60606
(800) 767-3771; (312) 630-9880
www.zacks.com

Sources for Industry Statistics

**Almanac of Business and
Industrial Financial Ratios**
CCH
4025 W. Peterson Ave.
Chicago, Ill. 60646-6085
(800) 248-3248
www.cch.com
Provides financial ratios and operating factors for 192 industries. Published annually.

Barron's
Dow Jones and Co.
200 Burnett Rd.
Chicopee, Mass. 01020
(800) 544-0422
www.barrons.com
A listing of the Dow Jones Industry Groups is given in the Market Statistics Section.

**Dun & Bradstreet Industry Norms
and Key Business Ratios**
103 JFK Pkwy.
Short Hills, N.J. 07078
(800) 234-3867
www.dnb.com
Calculates industry norms of financial statement items on 800 types of businesses and one million private and public companies.

Investor's Business Daily
P.O. Box 92042
Inglewood, Calif. 90009
(800) 831-2525
www.investors.com
Investor's Business Daily Industry Prices includes price changes in 197 industry indexes.

RMA Annual Statement Studies
Risk Management Association
1801 Market St., Suite 300
Philadelphia, Penn. 19103-1628
(800) 677-7621
www.rmahq.com
Composite financial data for the most recent fiscal year is provided on approximately 700 industries.

**Standard & Poor's Industry
Surveys**
Monthly data is provided on over 50 industries.
**Standard & Poor's Analyst's
Handbook**
Reports the performance of over 130 industries as defined by the S&P subindexes.
55 Water St.
New York, N.Y. 10041
(800) 221-5277
www.standardandpoors.com

Value Line Investment Survey
220 E. 42nd St.
New York, N.Y. 10017-5891
(800) 634-3583
www.valueline.com
The Ratings and Reports volume (Part Three of the survey) presents composite statistics on each industry individually in various issues.

The Wall Street Journal
Dow Jones & Company
200 Burnett Rd.
Chicopee, Mass. 01020
(800) 544-0422
wsj.com
The Dow Jones Industry Groups is presented daily.

Sources of Information on the S&P 500 Index

Standard & Poor's Outlook

55 Water St.
New York, NY 10041
(800) 221-5277
www.standardandpoors.com

For a longer-term view of the S&P 500 index:

Standard & Poor's Security Price Index Record is published by S&P.

PROBLEMS YOU MAY ENCOUNTER

While outside information sources are useful, it is important to understand how the information service you are using derives its figures, especially for comparative purposes. This is particularly important in the calculation of earnings per share, which is subject to some financial accounting manipulation. For instance, companies can have conservative accounting policies in which they depreciate assets relatively quickly or take large allowances for bad debt, either of which leads to greater initial expense and consequently lower earnings.

The way the information service handles accounting differences can make a big difference. As an example, Value Line does not include non-recurring gains or losses in its calculations but instead chooses to footnote those amounts. Standard & Poor's, on the other hand, chooses to include extraordinary items in its reports, which makes it possible for the two services to come up with different historical growth rates for the same company.

Dividends are subject to less accounting differences than earnings, but the information services may handle extraordinary dividends differently.

In comparing companies, the date of the fiscal year-end can also have an impact. The effect of fiscal year-end differences is sometimes magnified in times of economic turnaround or industry upheaval. Differences of only six months can have a major impact on the calculation of historical growth rates and ratios. The key is to know that such differences may exist and to keep these in mind when comparing companies.

Because of these differences, it is probably best for beginners to stick to one information source when comparing companies.

GROWTH RATES AND ESTIMATES

The simplified valuation approach requires estimates of next year's earnings and dividends per share. You can either come up with your own estimates, based on an examination of past growth and a forecast of future company and industry prospects, or use outside information sources for estimates.

Equation to Determine Growth Rate of Earnings Per Share (EPS) & Dividends Per Share (DPS)

$$(EV/BV)^{1/n} - 1.00 = g$$

Where:

- EV = Ending value (latest EPS or DPS)
- BV = Beginning value (earliest EPS or DPS)
- n = Number of yearly periods
- g = Growth rate in decimal form

Note that if you have five years of data, you will have only four yearly periods. For instance, EPS and DPS figures for Year 1, Year 2, Year 3, Year 4 and Year 5 represent four yearly periods: Year 1-2, Year 2-3, Year 3-4 and Year 4-5. Also note that the formula only works when the beginning and ending figures are positive.

Equations to Estimate Next Year's EPS or DPS

$$EPS_{CY} \times (1.00 + g) = EPS_{est}$$

or

$$DPS_{CY} \times (1.00 + g) = DPS_{est}$$

Where:

- EPS_{CY} & DPS_{CY} = Current year EPS & DPS
- EPS_{est} & DPS_{est} = Next year's estimated EPS & DPS
- g = Growth rate in decimal form

Determining Growth Rate and Next Year's EPS or DPS: An Example

$$(EV/BV)^{1/n} - 1.00 = g$$

Where:

- EV = \$5.00
- BV = \$2.00
- n = 4
- g = Growth rate in decimal form

$$(\$5.00/\$2.00)^{1/4} - 1.00 = g$$

$$(2.50)^{1/4} - 1.00 = g$$

$$1.257 - 1.00 = g$$


$$0.257 \text{ or } 25.7\% = g$$

Estimate of Next Year's EPS or DPS:

$$\$5.00 \times (1.00 + 0.257) = EPS_{est} \text{ or } DPS_{est}$$

$$\$5.00 \times 1.257 = EPS_{est} \text{ or } DPS_{est}$$

$$\$6.28 = EPS_{est} \text{ or } DPS_{est}$$



If you wish to use the historical growth rate as a guide to future earnings and dividends, you need to determine the historical growth rate over the past five years using the historical per share data from the worksheet. The formula to calculate the growth rate is presented on page 16.

Next year's earnings and dividends per share can then be estimated by multiplying the current year's earnings and dividends per share by 1.00 plus the growth rate. (This formula is also presented on page 16.) Of course, this is a very naive forecast. You need to determine whether growth should continue at the same rate. Studying the firm, its products, and its competitive environment will help guide your decision to adjust the growth up or down.

Estimates of next year's earnings and earnings growth can also be obtained from outside sources such as Value Line, which derives its own estimates (and which also estimates dividends for the next year), or from consensus reports (see page 14). In consensus reports, a large number of analysts are periodically polled and asked for their estimates of earnings per share for the next few years, along with estimates of long-term growth rates. If you do not use these estimates in your valuation, they can still provide insight to the market's perception of the firm's prospects.

INDUSTRY INFORMATION

Industry information for comparison purposes is available from a wide variety of sources (see page 14). Some of these sources are expensive, so you may want to check with your local library.

Information on the overall "market" is available in many newspapers. Most sources tend to report on the price level of the Dow Jones industrials, or the Dow 30. However, when performing comparative analysis of large company stocks, the standard benchmark used by analysts is the Standard & Poor's 500 index (see box on page 15).



Appendix A

Using a Computer for Fundamental Analysis

In today's fast-paced investment world, people are increasingly turning toward computers for assistance in the investment decision process. This chapter will explore the methods of putting a computer to work locating and analyzing stocks through fundamental analysis.

Fundamental analysis refers to the process of selecting stocks based upon underlying economic trends and long-term expectations of future company performance. The crucial variable in fundamental analysis revolves around projected growth in factors such as sales, cash flow, earnings and dividends. Software for fundamental analysis is usually broken down into two categories—screening and valuation. Screening refers to the act of searching through a large universe of securities to locate a few that might hold promise and warrant further analysis. Valuation, on the other hand, refers to taking one company and applying a series of valuation models to determine if the current price can be considered fair.

FUNDAMENTAL SCREENING

Screening dictates that the search process start with a broad universe of companies. It is not practical to enter this data by hand, so investors must either acquire the complete database and store it on their computer for screening or connect to another computer and have it perform the screen and return only the results of the screen.

In comparing stock screening services, critical factors include: the universe of stocks supported by the database, the depth of stock information, the flexibility of screening software, the frequency of updates, distribution methods, computer system support, and price. Screening services vary widely in the number of stocks tracked. When contemplating a data vendor, consider the types of companies that you are trying to find. If your focus is only on larger, more established companies, then less company coverage may not be a limitation. However, if you are seeking smaller, less-followed firms, look for a service that covers a wider range of stocks.

Screening services vary in the depth of stock information they provide. Some services provide a fewer number of variables for each company and depend more on summary statistics, such as growth rates, when providing background data. Other services, such as AAI's *Stock Investor Pro*, provide both summary statistics and the raw year-by-year or quarterly data behind these numbers. In considering a data service, look not only

at the number of variables but also specifically at which statistics are provided. Value Line Investment Analyzer allows you to screen companies based upon Value Line's proprietary rankings and projected growth rates, which may be more important for some investors than a complete database. Before settling on a service, obtain a listing of available screening variables to determine if the software or Web site will support those variables you find important.

FLEXIBILITY

The next consideration in selecting a screening service is the flexibility of the screening software. Screening services that distribute a complete database and then allow you to manipulate the data tend to offer more flexibility than strictly on-line services. For example, products such as Morningstar's *Principia for Stocks*, *Stock Investor Pro* and Value Line Investment Analyzer allow users to combine existing fields to create custom variables.

When comparing screening services, look for flexibility in creating the screening criteria. Exporting data allows users to move information to a spreadsheet program. The better services allow users to export company data.

DISTRIBUTION OF DATA

The method of data updating may play a role in selecting a vendor. *Stock Investor Pro* allows you to update your database either by mailed disks or by downloading the data via the Internet. Other services only offer disk updates via mail. The pure on-line vendors require an Internet connection to perform a screen.

The frequency of the data updates must also be considered. On-line services typically update their database on a daily or weekly basis. If the complete database resides on your computer, then you must select a delivery schedule, which will determine the annual cost. Options vary from weekly updates to annual updates. Expect to pay anywhere from \$100 to over \$1,000 per year, depending upon how frequently you update and who supplies the data. For the long-term investor who is planning less frequent portfolio revisions, quarterly or monthly updating may be sufficient. For the short-term trader, daily updating may be needed.

COMPUTERIZED INVESTING TIPS

The computer can be a very useful tool for the investor. We provide here a list of a few of the services available. There are very few stand-alone, disk-based fundamental stock screening programs for individual investors. This reflects a trend that has been underway for the past several years as the Web has become more popular. While disk-based applications are more flexible and powerful than their Internet counterparts, Web-based tools have matured to the point that a number of them offer a strong combination of screening features.

Before selecting a service, keep these items in mind:

- Ask for a demo version of the product. If one is not available, make sure that you

Fundamental Screening Services: A Sampling

Disk-Based Screening

Principia for Stocks (Windows) Morningstar, (800) 735-0700, www.morningstar.com. \$675/yr.; monthly updates.

Stock Investor Pro (Windows) American Association of Individual Investors, (312) 280-0170, (800) 428-2244, www.aaii.com. \$198/yr. monthly CD-ROM and weekly on-line updates; \$247 for non-members

Value Line Investment Analyzer (Windows) Value Line Publishing, (800) 634-3583, www.valueline.com. \$598/yr. standard edition; \$995/yr. plus edition; monthly updates.

On-Line Screening

Morningstar.com, www.morningstar.com, free—\$145/yr.

MSN Money, moneycentral.msn.com/investor, free.

SmartMoney.com, www.smartmoney.com, \$59/yr.

can return the product if you are not satisfied. Some vendors offer a full refund, others charge a restocking fee, while still others will not refund your money at all. Understand the return policy before you buy the product, not after.

- Look at the support policies of the company: Do they offer telephone support and, if so, when is it available? Some vendors charge for providing help. Some may operate a Web site or forum that you can connect to—not only to solve problems, but also to get operating tips.
- If you are purchasing via mail order, it is best to do so with a credit card. If you have problems either receiving the product or getting it to work, then you have some recourse. The Fair Credit Billing Act gives you some power to withhold payment on items purchased if you have made a good faith effort to provide the seller with an opportunity to correct any problems.
- Most importantly, try talking to other investors. Attend a local chapter meeting or go on-line—most on-line services have investment special interest forums, which allow users to read and post messages with other users.

In using and selecting an investment program, keep in mind that the computer is only a tool to aid the user in the decision-making process. Just as buying a hammer will not make you a carpenter, buying a computer system and investment software will not make you a successful investor.

It is your knowledge, aided by the information gathering and processing capabilities of a computer system, that will lead to success.



Using the Dividend-Yield Approach to Investing

We have already laid out a basic framework for building a stock portfolio that consists of:

- Developing a list of promising candidates, with the criteria based on your return objectives, tolerance for risk, and investment philosophy. This defines your overall investment strategy;
- Performing financial statement and ratio analysis, by gathering information on and analyzing the financial condition of prospective companies;
- Performing stock valuation, which involves estimating what you feel a prospective stock is worth; and
- Making a final decision on whether to buy or not, based on a comparison of the stock's current market price to the value you have placed on the stock.

We have also discussed a simplified approach to financial statement and ratio analysis, including a worksheet to help you organize useful information. But how do you apply this simplified approach to various investment strategies? In this chapter, we'll illustrate this approach and the use of the worksheet by focusing on the dividend-yield approach to investing. Appendix B discusses screening on a computer database using the dividend-yield model.

DEVELOPING THE INITIAL LISTS

A dividend-yield strategy can help you find potentially undervalued stocks with low downside risk, provided the dividend is secure and expected to grow, and the firm is financially sound. This strategy will also tend to produce more income in the form of dividends, and less in the form of capital gains, than other strategies.

We have already presented sources of information for financial statement and ratio analysis. These sources provide thorough, consistent and easy-to-compare information. But it would be difficult for an investor to go through each company page by page and compare dividend yields for thousands of companies. For the beginning investor, there are other more useful sources from which you can draw your initial list of prospective candidates.

Most of the sources are inexpensive; they may also be available in your local library. Many of these sources do not present information that is sufficient or consistent (for instance, on a calendar-year basis) for the financial statement and ratio analysis that

Drawing Up an Initial List: Sources of Information

Mergent's Handbook of Dividend Achievers

Mergent Inc., 580 Kingsley Park Dr., Fort Mill, S.C. 29715, 800/342-5647, www.mergent.com.

The book includes information on 300 companies that have increased their dividends consistently over the past 10 years. The listings include a company's dividend achiever rank, as well as the company's dividend growth rate for the latest 10-year period.

For the companies listed, the book includes the summary data pages that appear in Mergent's Handbook of Common Stocks.

Standard & Poor's 500 Guide, yearly edition

Published by McGraw-Hill, P.O. Box 182604, Columbus, Ohio 43272, 800/262-4729, www.mcgraw-hill.com.

It includes two useful lists:

Stocks with A+ earnings and dividend rankings and Companies with 10 consecutive years of increasing dividends.

This published guide includes the data pages found in the S&P Stock Reports.

Standard & Poor's Earnings Guide

Standard & Poor's Corp., 55 Water St., New York, N.Y. 10041, 800/221-5277, www.standardandpoors.com. Monthly.

Includes summary (one-line) information and focuses on earnings, but the front includes one short useful list: *Dividend Increases With Strong Coverage*: These are firms that have passed a fairly rigorous screen including increasing dividends, a payout ratio that has been between 10% and 90% for each of the last five fiscal years, and an average dividend coverage (earnings divided by dividends) for five years that has been at least 1.7 (an indication of dividend safety). One advantage to this list is that it is updated monthly.

Standard & Poor's Industry Surveys

This monthly review of over 50 industries includes dividend yield percentages for each industry. In the back of these reports, there are one-line listings for selected companies within the industry; included in these listings are dividend yields. Thus, you can easily compare dividend yields of companies relative to their industry. The listing also provides S&P's earnings and dividend rank.

Value Line Investment Survey

Value Line Publishing Inc., 220 E. 42nd St., New York, N.Y. 10017-5891, 800/634-3583, www.valueline.com.

Part 1 Summary & Index:

The front page lists median estimated yields of all stocks. The tables in the back (see index for the page numbers) include several useful lists:

High Dividend Yielding Stocks: This consists almost entirely of utilities, since the large number of firms in this industry causes them to dominate the list. For this reason, you would not want to concentrate solely on this list.

Highest Dividend Yielding Non-Utility Stocks: Financial companies tend to dominate the list, but it is still useful. The listing also notes if dividend cuts are possible.

(continued on next page)

Also of Note:

One well-known newsletter that is devoted to the dividend-yield approach is Investment Quality Trends. Each newsletter looks at the dividend yield of some 350 blue-chip stocks with high ratings and strong dividend-paying histories. It is published twice monthly. \$310/year for the print version; \$265/year for the on-line version.

Investment Quality Trends

6450 Lusk Blvd., Suite E-104, San Diego, Calif 92121
858/459-3818, www.iqtrends.com

must be done later. In addition, several are published annually, so the information in them may become dated. However, they do provide a good starting point to narrow your search. For computer users, an initial list of candidates can be compiled by applying various screens to a database of stocks (see Appendix B).

In using these lists and screens, be careful that you do not accidentally concentrate on a specific industry; you must be particularly careful using this strategy, since utilities and, to a lesser extent, financial companies will tend to dominate many of the lists. Since the approach works best with companies paying meaningful dividends, look for dividend yields of at least 2% or more. In addition, you should decide if you want to concentrate on absolute yield (is the dividend yield high compared to all other companies?), relative yield (is it low relative to its industry or to its historical average?), or perhaps both. This will help narrow the selection. Other conditions can help narrow the selection further—a high risk ranking or rating by one of the information sources.

Once a list of candidates is established the next step is to perform an in-depth evaluation of the stocks on the list to determine the fair market value.

PHARMACEUTICALS INC.: AN EXAMPLE

Pharmaceuticals Inc. offers a good example of the dividend-yield approach, with an above-average dividend yield of 5.7%.

Earlier in the example year, Pharmaceuticals Inc. represented a fallen angel—a former growth company that had moved into a more mature, slower growth stage. It had popped up on the lists of high-yielding stocks because of concerns over both the industry and company. At that time, in comparison to the overall stock market, drug stocks had been weak performers. Uncertainty surrounding changes to our nation's healthcare and its impact on the traditional drug manufacturers had led to devaluation of drug stocks even though the short-term profit picture had not changed. In the long term, Value Line noted that the industry, long regarded as a growth vehicle, could in a "worst-case scenario" go the way of regulated utilities.

Individual company concerns for Pharmaceuticals Inc. included costs associated with settling cases dealing with silicone breast implants, fewer tax credits for manufacturing

operations in Puerto Rico, as well as the normal drug firm concerns involving the loss of patent protection for drug products.

Value Line was used as the source of both company and industry information on the completed valuation worksheet that follows on page 26. Entering the per share data from a source such as Value Line or S&P is a fairly straightforward process. Numbers are entered into the worksheet from left to right, with the Year 1 column containing the oldest data and Year 5 the most recent. The difficulty lies in determining the type of adjustments the data services made to provide the information. Value Line does not include non-recurring items in its data. For Year 5, Pharmaceuticals Inc. had a \$0.60 per share special charge, but this is only footnoted in the \$4.40 earnings per share figure it reports for Year 5. Using the reduced \$3.80 figure in the valuation worksheet would change the high and low price-earnings ratios for the year, the average price-earnings ratios, the earnings per share growth rate, payout ratio, return on equity, and, ultimately, the valuation. Once you select a source for company information, it is important to stick with it for all of the data elements, unless you know how to adjust the figures to make everything comparable.

Many analysts like to use dividends to value a company because of the purity of the dividend. The reported dividend paid is exactly what was paid, while management has some latitude in reported earnings figures. They may use liberal accounting principles to report higher earnings or decide to defer or take special charges to earnings until it works to their advantage.


A TOUR THROUGH THE WORKSHEET: PER SHARE INFORMATION

The first item that should strike you as you look at the price information is the change in trend that occurred between Year 4 and Year 5. Pharmaceuticals Inc.'s price peaked at just over \$90 in early Year 4, compared to a mid-Year 6 price of \$51.50. This change coincides with weakness in the drug industry.

Next, it is important to examine the year-by-year dividend and earnings per share figures. Even though we are focusing on dividends, it is the profitability and cash generation of the firm that supports the dividend. First, examine the year-by-year figures—are they increasing, decreasing, or holding steady? Has there been a change in trend? Steady, increasing figures are best. Using the Value Line data, we see that earnings, dividends, and book value have increased every year. The five-year average growth rates for earnings and dividends have been 12.5% and 9.5%, respectively. These are strong growth rates, but both earnings and dividends show some slowdown in their growth rates in the later years. Calculating the year-by-year percentage change for earnings and dividends is an effective tool for identifying changes in trends and growth rates.

LOOKING AT THE FINANCIAL RATIOS

Since our valuation of Pharmaceuticals Inc. focuses on dividend yield, the portions of the worksheet pertaining to the price-earnings ratio and earnings valuation have been grayed out.



In the dividend analysis of a firm, the consideration of the safety of the dividend is of great concern. A high current yield itself does not mean that a stock is undervalued. It may indicate that the market feels that the dividend is in jeopardy. For a high relative current dividend yield to be considered a sign of an undervalued stock, the company must be expected to continue to pay and expand the dividend both this year and for years to come.

The payout ratio (dividends per share divided by earnings per share) is particularly useful in gauging the strength of the dividend. Generally, the lower the payout ratio, the more secure the dividend. Any ratio above 50% is considered a warning sign. However, like all ratios, the payout ratio is industry-specific. Very stable industries, such as utilities, have high payout ratios, which is considered normal. A 100% payout ratio shows that a firm is paying out all of its earnings to its shareholders. Figures above 100% indicate that the payout is greater than earnings, a situation that cannot continue forever; negative ratios show that a company is paying out a dividend while losing money.

Pharmaceuticals Inc. has averaged a 66% payout ratio over the last five years, a figure higher than one would generally like to see. Beyond not having enough cash to cover the dividend payment, a policy of high dividend payout may limit future growth if capital expenditures and research and development are reduced to maintain the dividend. Drug firms are not capital-intensive, but they are research-intensive. Investment in research takes many years, if ever, to pay off.

Financial leverage is another indicator of dividend safety. Heavier debt loads saddle a company with required cash outflows to bondholders, who must be paid before dividends can be paid to shareholders. A company with little debt that runs into earnings problems has the ability to borrow. For Pharmaceuticals Inc., we have used the ratio of long-term debt to equity as a measure of financial leverage. This figure was selected because comparable industry data was also available for this ratio. Pharmaceuticals Inc.'s ratio of 6% with a 4% five-year average is very low. This also compares favorably with the industry figure of 12% for Year 5 and the industry's 15% five-year average. While the ratio of long-term debt to equity is a common ratio, it does possess some inherent weaknesses. The ratio does not consider short-term liabilities or other liabilities that are significant for Pharmaceuticals Inc. The ratio of total debt to total assets shows that liabilities are equal to about half of total assets, higher than the 34% figure for the drug industry. (This information was ascertained through AAI's *Stock Investor* program but can be calculated from a company's balance sheet as well.)

It is the dividend yield portion of the financial ratio section that is of primary importance in the dividend valuation process. Looking at year-by-year figures shows an interesting change in trend. From Year 1 to Year 4, Pharmaceuticals Inc.'s dividend yield was trending down. This was a period of tremendous performance for drug stocks. Since then the yield has risen steadily due to an increasing dividend coupled with a stock price decline. The five-year average high and low yields are 4.6% and 3.3%, respectively, levels significantly below the current yield of 5.7%.

Valuation Worksheet

Company: Pharmaceuticals Inc. Current Price \$ 51.50 Date (3 / 31 / Year 6)

Ticker _____ Exchange _____ Current P/E 13.6 Current Yield 5.7%

Financial Statement & Ratio Analysis

Per Share Information	Company						Industry or Competitor	Market	
	Year 1	Year 2	Year 3	Year 4	Year 5	5-Year Avg	Year 5	5-Year Avg	Year 5
	Price: High	58.0	68.0	89.4	90.1	67.3			
Price: Low	44.0	50.5	61.1	60.1	50.9				
Earnings per Share (EPS)	2.75	3.33	3.95	4.07	4.40	growth rate: 12.5%			
Dividends per Share (DPS)	2.00	2.12	2.40	2.76	2.88	growth rate: 9.5%			
Book Value per Share (BV)	9.67	10.34	11.15	11.62	12.10				
Financial Ratios									
Price-Earnings Ratio (P/E): Avg	18.5	17.8	19.1	18.5	13.5	17.5	NA	18.3	21.3
High (High Price ÷ EPS)	21.1	20.4	22.6	22.1	15.3	20.3			
Low (Low Price ÷ EPS)	16.0	15.2	15.5	14.8	11.6	14.6			
Dividend Yield % (DY): Avg	4.0	3.7	3.3	3.9	5.0	4.0	NA	2.5	2.7
High (DPS ÷ Low Price)	4.5	4.2	3.9	4.6	5.7	4.6			
Low (DPS ÷ High Price)	3.4	3.1	2.7	3.1	4.3	3.3			
Payout Ratio % (DPS ÷ EPS)	72.7	63.6	60.7	67.8	65.4	66.0	44.0	45.6	
Return on Equity % (EPS ÷ BV)	28	32	35	35	36	33	30	29	
Financial Leverage* %	5	4	2	3	6	4	12	15	

* long-term debt divided by equity. Figures in gray type were not needed for this valuation. Year 1 data is oldest; Year 5 is the most recent.

Valuation Estimates

Model based on earnings:

Average high P/E × estimated Year 6 EPS: $\frac{20.3}{14.6} \times 4.70 = \95.41 (high valuation estimate)

Average low P/E × estimated Year 6 EPS: $\frac{14.6}{20.3} \times 4.70 = \68.62 (low valuation estimate)

Model based on dividends:

Estimated Year 6 annual DPS ÷ average low DY: $\frac{2.92}{0.033} = \$88.48$ (high valuation estimate)

Estimated Year 6 annual DPS ÷ average high DY: $\frac{2.92}{0.046} = \$63.48$ (low valuation estimate)

Use decimal form for DY. For instance 5.4% would be 0.054.

VALUING THE COMPANY

The bottom of the Valuation Worksheet provides valuations using the dividend-based model. Applying the model to Pharmaceuticals Inc. paints an interesting picture. The first item that needs to be determined is the appropriate per share dividend for next year (Year 6). The worksheet uses Value Line's Year 6 dividend estimate of \$2.92, leading to a high valuation of \$88.48 and low valuation of \$63.48. This compares to a current (mid-Year 6) price of \$51.50. But before you reach for the phone to call your broker, let's look at some of the assumptions behind the numbers.

The first area to consider is the dividend itself. The estimated Year 6 figure of \$2.92 represents an increase, although small, over the \$2.88 dividend for Year 5. If you were to expand last year's dividend by the historical growth of 9.5% you would get \$3.15 [$\$2.88 \times (1 + 0.095)$], showing that \$2.92 falls significantly short of the past trend. This figure even falls below Value Line's 8.5% estimate of long-term dividend growth and is the first signal of a change in trend. It is a good exercise to try different dividend estimates and see the impact on the valuation. If you think a dividend cut is possible, try the valuation with the new dividend. A halving of the \$2.88 dividend to \$1.44 leads to a valuation range of \$31.30 to \$43.64, all else being equal.

The next area to look at is the average high and low dividend yields. In considering whether the five-year averages of 3.3% and 4.6% are appropriate numbers, you need to ask whether the fundamental characteristics of the company have changed and higher levels are appropriate. If you assume the government will start to further regulate the industry and set prices, then these drug firms may become more like utilities and trade with higher expected yields, coupled with lower growth rates and lower profit margins. Under this scenario the current price seems fair. Changing the required dividend yield to 6% leads to a valuation of \$48.67 using the \$2.92 dividend estimate.

By changing the required dividend yield to determine the effect on valuation, you can quickly see that the stock price is even more sensitive to slight changes in yield than to changes in dividend.

CONCLUSION

Performing sensitivity analysis of this nature is a critical part of the valuation. It helps to provide you with a sense of the factors that drive a stock price and informs you of the factors to focus on when performing the valuation.

The worksheet focuses on the quantitative factors of valuation. Any final decision should also be based on a better understanding of the company, its management, and its competitive environment. This can only be accomplished by a thorough reading of the firm's financial reports, as well as the reports and summaries on the firm and its industry.

In Appendix B, we discuss the approach and some of its problems in more detail, particularly as it's used to screen a database.



Appendix B

Screening for Stocks Using a Dividend-Yield Approach

Many investors turn toward the dividend yield as a measure of value in their quest for selecting underpriced securities. A stock's dividend yield is computed by taking the indicated dividend—the most recent quarterly dividend multiplied by four—and dividing it by the share price. If a stock's price rises faster than its dividend, the dividend yield will fall, indicating that the price may have been bid up too far and may be ready for a decline. Conversely, if the dividend yield rises to a high level, the stock may be poised for an increase in price, if the dividend can be sustained.

This chapter will focus on strategies used to screen a database for high dividend-yielding stocks.

THE DIVIDEND-YIELD STRATEGY

Like all basic value-oriented techniques, the dividend-yield strategy attempts to identify investments that are out-of-favor. Contrarian techniques such as this are based on the premise that markets tend to overreact to good and bad news and push the price of a security away from its intrinsic value. Value investors hope to identify these mispriced securities through the use of a consistent set of rules called a valuation model.

Screening is the first stage in this process and it involves scanning a group of securities to find those that merit further in-depth analysis. Absolute or relative levels may be used in screening for high-yield stocks. A screen requiring an absolute level might look for a minimum dividend yield of 4% before an investment would be considered. Absolute screens can lead to passive market timing—cash levels tend to build up when investors cannot find suitable investments that meet the minimum requirement during times of market extremes. Also, screens that only look at absolute levels can be weak because they may turn up companies from a single industry that traditionally has higher dividend yields, such as utilities.

Screens based on relative levels compare the yield against a benchmark that may fluctuate, such as the current dividend yield for the S&P 500 or the company's historical average yield. In this case, the investor does not require that the yield meet some minimum level, but instead that it maintain its historical relationship with the benchmark figure. Common screens examining relative yields include comparisons against some overall market level, industry level, historical company average or even some interest rate benchmark. The screens for this chapter were performed using a historical average

as the benchmark.

Investors looking to perform custom screens can use one of a number of software programs or information services that provide fundamental data on companies. (See Appendix A for information on computerized investing tools and a listing of available screening tools.)

APPLYING THE SCREENS

AAII's *Stock Investor Pro* program was used to perform the screening.

The first filter excluded utilities, real estate investment trusts, and closed-end mutual funds. Each of these groups has unique financial characteristics requiring that they be analyzed separately.

The next screen required that a company have five years of both price and dividend records. When screening against a historical level, remember to include a historical period that covers both the up and down periods of a stock market and economic cycle.

Selecting a time period is a balance between using one that is too short and only captures a segment of the market cycle and one that is too long and includes a time period that is no longer representative of the current company, industry, or market. Periods of between five and 10 years are most common for these types of comparisons.

Dividend analysis is geared toward established firms that are past their explosive growth and capital-intensive stage. To help filter out companies paying just token dividends, a minimum dividend yield of 1.5% was specified.

Beyond a minimum level of dividends, we screened for companies that have paid a dividend for each of the last five years and never reduced their dividend. Dividend levels are set by the board of directors based on consideration of the current company, industry, and economic conditions. Because dividend cuts are tantamount to an announcement that the firm is financially distressed, dividends are set at levels that the company should be able to afford throughout the economic cycle.

The next filter required that the company's current dividend yield be higher than its five-year average dividend yield. This filter seeks out companies whose dividends have increased faster than increases in share price, or whose current share price has dipped recently.

While it might seem that screening should be over with this last filter, the security of the dividend must be examined before a company can be considered a buy. A high dividend yield may be a signal that the market expects the dividend to be cut shortly and has pushed down the price accordingly. A high relative dividend yield is a buy signal only if the dividend level is expected to be sustained and hopefully increased.

Measures exist that help to identify the safety of the dividend. The payout ratio is perhaps the most common of these and is calculated by dividing the dividend per share by earnings per share. Generally the lower the number, the more secure the dividend. Any ratio above 50% is considered a warning flag. However, for some industries, such as utilities, ratios around 80% are common. The current payout ratio for the Dow Jones utility group is 82%, versus 55% for the Dow Jones industrial group. A 100% payout

Definitions of Screens

The following is a short description of the screens and terms used in the table.

Dividend Yield: Indicated dividend divided by current price. Provides a relative valuation measure when compared against historical average dividend yield.

Five-Year Average Yield: Average company dividend yield during the last five years.

Indicated Dividend: Expected per share dividend payment for the next year.

Dividend Growth Rate: Annual growth rate in dividends per share over the last five years. An indication of the past company strength and dividend payment policy.

Payout Ratio: Dividends per share for the last 12 months divided by earnings per share for the last 12 months. Provides an indication of

the safety of the dividend. Figures between 0% and 50% are considered safe. Figures ranging between 50% and 100% are considered early warning flags. Negative values and values above 100% are considered red flags for a dividend cut if the levels persist. Beyond examining a single year, look for trends.

EPS Growth Rate: Annual growth rate in earnings per share over the past five years.

52-Week Relative Strength: The price performance of a stock during the last year relative to the performance of the overall stock market. A figure of 0% indicates the stock had the same percentage price performance as the market. A figure of 5% indicates that the stock outperformed the market by 5%.

ratio indicates that a company is paying out all of its earnings in the form of dividends. A negative payout ratio indicates that a firm is paying a dividend even though earnings are negative. Firms cannot afford to pay out more than they earn in the long term. For the final criterion we required a payout ratio between 0% and 50%, leaving 155 companies.

To highlight a cross section of stocks, along with any differences due to company size, the stocks were divided up into three groups based upon market capitalization. The top 15 dividend-yielding stocks for each group are listed. Market capitalization is determined by multiplying the number of shares outstanding times a firm's stock price. The largest firms have a market capitalization above \$5 billion dollars, the middle-capitalization firms range in size between \$1 billion and \$5 billion, and the small-capitalization firms are those below \$1 billion in market capitalization.

THE RESULTS

The screening used data as of February 29, 2004. The three groups, while similar in fundamentals, differ slightly. The small-cap stocks have the highest dividend yield among the three groups. The 52-week relative strength measure points to a collection of companies

Top Dividend Yielders

Company (Exchange)	Div Yield (%)	5-Yr Avg Yield (%)	Indic'd Div (\$)	Div Grth Rate (%)	Payout Ratio (%)	EPS Grth Rate (%)	52-Wk Rel Strgth (%)	Industry
Large Cap (above \$5 billion)								
General Motors Corp.* (NY)	4.2	3.6	2.00	0.0	29.4	3.1	5	Auto & Truck Manufacturers
Telefonos de Mexico, S.A. (NY)	4.2	2.5	1.41	12.6	34.0	13.4	-14	Communications Services
Bank of America Corp.* (NY)	3.9	3.8	3.20	12.6	39.6	19.7	-13	Money Center Banks
Washington Mutual Inc.* (NY)	3.7	3.0	1.68	20.5	33.0	19.2	-4	S&Ls/Savings Banks
BellSouth Corporation* (NY)	3.6	2.3	1.00	4.7	43.4	1.7	-7	Communications Services
First Tennessee National [†] (NY)	3.5	3.0	1.60	13.5	35.1	16.0	-11	Regional Banks
Sara Lee Corp.* (NY)	3.4	2.7	0.75	6.6	49.6	34.4	-19	Food Processing
Citigroup Inc.* (NY)	3.2	1.7	1.60	32.7	33.0	21.2	11	Money Center Banks
Merck & Co., Inc.* (NY)	3.1	2.0	1.48	10.7	45.6	10.9	-33	Major Drugs
Wells Fargo & Company* (NY)	3.1	2.3	1.80	16.5	40.7	23.7	-7	Money Center Banks
Albertson's, Inc.* (NY)	3.1	2.5	0.76	3.5	44.7	2.9	-3	Retail (Grocery)
Alltel Corporation* (NY)	2.9	2.2	1.48	4.1	32.7	7.1	-12	Communications Services
SouthTrust Corporation* (Nq)	2.9	2.7	0.96	17.2	40.4	13.0	-9	Regional Banks
Charter One Financial [†] (NY)	2.9	2.7	1.04	15.3	34.8	15.7	-8	S&Ls/Savings Banks
Fannie Mae* (NY)	2.8	1.6	2.08	9.5	23.4	9.9	-14	Consumer Financial Services
Mid Cap (\$1 billion to \$5 billion)								
Flagstar Bancorp, Inc. (NY)	3.9	1.9	1.00	49.6	10.6	44.2	57	S&Ls/Savings Banks
Community First Bankshare (Nq)	3.4	3.3	0.96	15.4	45.9	15.0	-16	Regional Banks
Corus Bankshares, Inc. (Nq)	3.1	1.5	1.25	3.5	35.9	5.6	36	Regional Banks
Arthur J. Gallagher & Co. (NY)	3.0	2.2	1.00	15.5	44.4	16.2	1	Insurance (Miscellaneous)
TCF Financial Corporation (NY)	2.9	2.7	1.50	16.3	43.1	11.6	-9	Regional Banks
Mercury General Corp. (NY)	2.9	2.8	1.48	13.5	38.9	1.0	4	Insurance (Property & Casualty)
Maytag Corporation* (NY)	2.6	2.2	0.72	1.1	47.1	-13.8	-14	Appliances & Tools
Trustmark Corporation (Nq)	2.5	2.2	0.76	15.6	32.7	14.6	-7	Regional Banks
Alfa Corporation (Nq)	2.4	2.3	0.32	8.4	32.7	6.7	-15	Insurance (Property & Casualty)
Polaris Industries Inc. (NY)	2.2	2.1	1.84	14.1	26.8	32.8	29	Recreational Products
Lancaster Colony Corp. (Nq)	2.2	2.0	0.92	7.6	34.4	7.0	-18	Food Processing
City National Corporation (NY)	2.1	1.9	1.28	11.6	25.5	13.2	-2	Regional Banks
Mentor Corporation (NY)	2.1	0.4	0.60	7.0	29.6	19.6	21	Medical Equipment & Supplies
Eagle Materials, Inc. (NY)	2.1	0.6	1.20	0.0	6.2	4.0	30	Construction - Raw Materials
First American Corp. (NY)	2.0	1.1	0.60	14.2	6.9	20.3	-3	Insurance (Property & Casualty)
Small Cap (below \$1 billion)								
S.Y. Bancorp, Inc. (A)	5.4	1.6	1.22	17.2	24.2	16.2	-9	Regional Banks
ABC Bancorp (Nq)	4.7	3.5	0.90	8.4	42.1	4.3	0	Regional Banks

(continued on next page)

Top Dividend Yielders (continued)

Company (Exchange)	Div Yield (%)	5-Yr Avg Yield (%)	Indic'd Div (\$)	Div Grth Rate (%)	Payout Ratio (%)	EPS Grth Rate (%)	52-Wk Rel Strgth (%)	Industry
Fresh Brands, Inc. (Nq)	3.9	2.4	0.36	5.9	25.9	7.6	-51	Retail (Grocery)
Riviana Foods Inc. (Nq)	3.7	2.8	1.00	9.8	38.0	6.7	-22	Food Processing
PHSB Financial Corp. (Nq)	3.6	2.4	0.80	9.0	39.2	11.8	-4	S&Ls/Savings Banks
First Independence/DE/ (OTC)	3.5	3.1	0.60	15.3	34.2	15.4	-22	S&Ls/Savings Banks
Winton Financial Corp. (A)	3.3	3.2	0.45	10.4	38.7	6.4	-4	S&Ls/Savings Banks
California First National (Nq)	3.2	1.4	0.40	0.0	31.8	-9.1	-16	Rental & Leasing
Cato Corporation (NY)	3.1	2.3	0.64	29.8	43.7	23.3	-10	Retail (Apparel)
Penns Woods Bancorp, Inc. (Nq)	3.1	3.0	1.40	12.1	40.1	2.3	-15	Regional Banks
Sensient Technologies (NY)	3.0	2.3	0.60	2.2	33.9	2.0	-30	Chemical Manufacturing
Provident Bankshares Corp (Nq)	3.0	2.9	0.98	18.7	42.7	16.8	3	Regional Banks
Badger Meter, Inc. (A)	3.0	2.8	1.08	16.3	48.2	5.9	-15	Scientific & Technical Instruments
First Financial Holdings, (Nq)	2.9	2.8	0.88	12.6	38.9	11.5	-11	S&Ls/Savings Banks
Wayne Bancorp, Inc./OH/ (Nq)	2.9	2.8	0.72	11.0	41.6	4.5	-32	Regional Banks

*S&P 500 stock

Exchanges: NY = New York Stock Exchange; A = American Stock Exchange; Nq = Nasdaq; OTC = Over-the-Counter

Source: Stock Investor Pro/Market Guide, I/B/E/S. Data as of February 29, 2004.

that have stumbled slightly, and the relative performance of their stock prices indicates this. The 52-week relative strength measures the relative stock price performance versus the S&P 500. Figures above 0% indicate that a stock has outperformed the market, while figures below 0% indicate underperformance. The vast majority of the companies that passed the screens have underperformed the market over the last year. The small caps, however, showed the weakest performance, both fundamentally in terms of earnings growth and technically in terms of price strength.

Screening for relative high dividend yield is based upon the time-honored rule of buying low and selling high. Examining a stock's dividend yield provides a useful framework to identify potential candidates.

To succeed at this strategy, you need to develop a set of tools to not only identify which stocks have relatively high dividend yields but also which of these stocks have the strength to bounce back.



A Basic Strategy for Growth Stock Investing

A growth approach to investing can help you find stocks with the potential for significant price appreciation, provided the firm is able to meet and exceed its growth expectations and you don't overpay for growth. This strategy produces very little return in the form of dividends and can be volatile because of the large role that expectations play in the pricing of these stocks.

COMPANY CHARACTERISTICS

Growth companies expand at a rate above that of the overall economy. Practically speaking, however, the minimum benchmark for being classified as a growth stock is at least a 10% annual growth rate in earnings per share, with many investors requiring a 20% annual growth rate. To maintain growth rates this high over any extended period, capital spending is required, and for this reason growth stocks tend to retain most of their earnings, paying little or no cash dividends.

Promising growth stocks attract a great deal of attention, and therefore prices tend to be bid up with high anticipation. High expectations relative to current levels of earnings lead to high price-earnings ratios, and it is not uncommon to see highly touted growth stocks with price-earnings ratios two to four times that of the market.

As long as the firm maintains its earnings per share momentum and exceeds the growth expectations of the market, its stock price can be expected to increase by quite a bit. However, a small deviation from market expectations during a quarterly earnings announcement can send the price flying in either direction. Thus, while growth stocks have the potential for high returns, they are also high risk.

THE INITIAL LIST

The first step in the basic framework, of course, is drawing up an initial list of promising candidates for further analysis. A growth approach focuses initially on companies that consistently have had above-average earnings growth over the past few years.

For the beginning investor, there are several sources from which you can draw your initial list. Most of these sources are inexpensive and may also be available at your local library. Keep in mind that these sources are useful primarily for the initial list—many of them do not present information that is sufficient or consistent for the financial statement and ratio analysis that must be done later. In addition, several are published annually, so

Drawing Up an Initial List: Sources of Information for the Growth Approach

BusinessWeek

BusinessWeek, P.O. Box 8418, Red Oak, Iowa 51591-1418, 800/635-1200, www.businessweek.com. Once a year, in June, the magazine comes out with an issue that includes Hot Growth Companies, a ranking of 100 small firms based on three-year results in sales growth, earnings growth and return on invested capital. The listing includes a short description of each firm.

Standard & Poor's 500 Guide, yearly edition

Published by McGraw-Hill, P.O. Box 182604, Columbus, Ohio 43272, 800/262-4729, www.mcgraw-hill.com.

It includes two useful lists:

Companies With Five Consecutive Years of Earnings Increase: Firms that have recorded rising earnings per share for five consecutive years, have a minimum 10% earnings per share growth rate based on trailing 12-month earnings, have estimated earnings per share at least 10% above those reported for the prior year, pay dividends, and have S&P earnings and dividend rankings of A- or better.

Rapid Growth Stocks: Firms that have shown strong and consistent earnings growth.

This annual guide includes the full-page data pages found in the S&P Stock Reports; since it is published annually, the data can be dated.

Standard & Poor's Earnings Guide

Standard & Poor's Corp., 55 Water St., New York, N.Y. 10041, 800/221-5277, www.standardandpoors.com. Monthly.

Includes summary (one-line) information and focuses on earnings and earnings growth estimates. The front includes two short useful lists:

Rapid Growth Stocks: These are firms that have been selected by S&P for superior earnings growth, with actual and estimated five-year annual earnings growth rates of at least 10%.

Standard & Poor's A+ Ranked Stocks: These firms carry high S&P rankings, have projected five-year earnings growth rates of at least 12%, are estimated to show earnings gains of at least 12% for each of the next two years, and have price-earnings ratios on estimated earnings of under 20.

One advantage to these lists is that they are updated monthly.

Value Line Investment Survey

Value Line Publishing Inc., 220 E. 42nd St., New York, N.Y. 10017-5891, 800/634-3583, www.valueline.com.

Part 1 Summary & Index:

The tables in the back (see index for the page numbers) include this useful list:

Highest Growth Stocks: This consists of firms with average growth rates of 11% or more over the last 10 years and estimated 11% or more growth in the next three to five years.

the information in them may become dated—a particular concern for growth investors, since quarterly earnings reports can produce unexpected surprises. However, they do provide a starting point to narrow your search.

For computer users, an initial list of candidates can be compiled by applying various screens to a database of stocks. Appendix C discusses screens based on the growth approach.

In using these lists and screens, be careful that you do not accidentally concentrate on a specific industry. In addition, cyclical companies may turn up on growth lists at certain times if they are in an upswing in their cycle. For this reason, make sure that you examine earnings growth over longer time periods covering at least one economic cycle to make sure you are focusing on true growth companies. Requiring consistently rising earnings each year can also help identify more stable growth companies. Other conditions can help narrow the selection further—for instance, eliminating companies with outrageous price-earnings ratios.

Once a list of candidates is established, the next step is to perform an in-depth evaluation of the stocks on the list to determine the fair market value.

TOY RETAILER INC.: AN EXAMPLE

Toy Retailer Inc. offers a good example of a growth stock examination, with actual and estimated five-year annual earnings growth rates of at least 10%, an average growth rate of 13% or more over the last 10 years and an estimated 13% or more growth rate in the next five years.

Earlier in the year, Toy Retailer Inc. represented a growth company that continued its expansion despite a large market capitalization. It did so first by outmatching its competition, and then by expanding its markets. The toy retailer more recently ventured into children's clothing, mail catalog sales, action figure and video software products, and foreign operations.

It was the latter area—foreign markets—that was coming under increasing scrutiny in analysts' projections. In any growth company, a major concern is how the company can continue to expand. Toy Retailer Inc. dominated the retail U.S. toy market, with subsequently less room to expand, and the retail market was not a growth industry; the focus, therefore, was into expanding their product lines or opening more stores overseas.

The completed valuation worksheet for Toy Retailer Inc. is shown on the next page. Value Line was used as the source of both company and industry information.

Entering the per share data from an information source is relatively straightforward, but it is important to stick to the same source for company information, since reporting services make different adjustments to the data they provide. However, one potential source of confusion may come when trying to determine the actual years covered by the data reporting source. For example, Toy Retailer Inc. has a fiscal year-end of January 31, which means that most of the activity for the firm will have taken place in the previous year. Value Line reports data for Year 5 based on the January 31, Year 6, fiscal year-end report. Standard & Poor's, on the other hand, reports Year 5 data based on the January 31,

Valuation Worksheet

Company: Toy Retailer Inc. Current Price \$ 34.62 Date (4/29/Year 6)

Ticker _____ Exchange _____ Current P/E 21.2 Current Yield 0%

Financial Statement & Ratio Analysis

Per Share Information	Company						Industry or Competitor	Market	
	Year 1	Year 2	Year 3	Year 4	Year 5	5-Year Avg	Year 5	5-Year Avg	Year 5
Price: High	26.80	35.00	36.00	41.00	42.90				
Price: Low	16.00	19.90	22.00	30.40	32.40				
Earnings per Share (EPS)	1.09	1.11	1.15	1.47	1.65	growth rate: 10.9%			
Dividends per Share (DPS)	0.00	0.00	0.00	0.00	0.00	growth rate: na			
Book Value per Share (BV)	5.95	7.11	8.39	9.85	11.60				
Financial Ratios									
Price-Earnings Ratio (P/E): Avg	19.6	24.7	25.2	24.3	22.8	23.3	19.0	17.9	21.3
High (High Price ÷ EPS)	24.6	31.5	31.3	27.9	26.0	28.3			
Low (Low Price ÷ EPS)	14.7	17.9	19.1	20.7	19.6	18.4			
Dividend Yield % (DY): Avg	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.1	2.7
High (DPS ÷ Low Price)	0.0	0.0	0.0	0.0	0.0	0.0			
Low (DPS ÷ High Price)	0.0	0.0	0.0	0.0	0.0	0.0			
Payout Ratio % (DPS ÷ EPS)	0.0	0.0	0.0	0.0	0.0	0.0	22.0	21.0	
Return on Equity % (EPS ÷ BV)	18.3	15.6	13.7	14.9	14.2	15.4	15.0	15.7	
Financial Leverage* %	10.1	9.5	16.1	23.2	19.5	15.6	30.4	34.1	

*long-term debt divided by equity. Figures in gray type were not needed for this valuation.
Year 1 data is oldest; Year 5 is the most recent.

Valuation Estimates

Model based on earnings:

Average high P/E × estimated Year 6 EPS: 28.3 × \$1.83 = \$51.79 (high valuation estimate)

Average low P/E × estimated Year 6 EPS: 18.4 × \$1.83 = \$33.67 (low valuation estimate)

Model based on dividends:

Estimated Year 6 annual DPS ÷ average low DY: _____ ÷ _____ = _____ (high valuation estimate)

Estimated Year 6 annual DPS ÷ average high DY: _____ ÷ _____ = _____ (low valuation estimate)

Use decimal form for DY. For instance 5.4% would be 0.054.

Year 5, fiscal year-end—which would be Year 4 data in Value Line’s report.

A TOUR THROUGH THE WORKSHEET: PER SHARE INFORMATION

The first item that may strike you is that the stock price that is “current” on the worksheet is nearly 20% below its all-time highs in Year 5—double the market’s decline from its high over the same time.

Toy Retailer Inc. reacted in classical growth stock fashion: Its price took a fall after the first of the year because it only met—and failed to exceed—expected predictions for a strong Christmas season. Underlying the strong but expected domestic performance was lower than expected foreign sales. Prices had not yet recovered from the post-holiday drop.

Next, it is important to examine the year-by-year earnings per share figures. Are they steadily increasing, or has there been a change in trend? Earnings clearly increased, but the biggest increase occurred in Year 4 when earnings shot up 27.8%. Calculating the year-by-year percentage change for earnings is an effective tool for identifying changes in trends and growth rates.

The Value Line data also shows an increase in book value every year.

LOOKING AT THE FINANCIAL RATIOS

Toy Retailer Inc. pays no dividend and so the portions of the worksheet pertaining to dividend yield and dividend valuation appear in gray typeface. However, that doesn’t mean that the company’s dividend policy can’t generate some useful insight.

Growth firms generally pay no dividends because they want to use capital for expansion. Toy Retailer Inc. in the spring of Year 6 paid no dividends, but it had recently announced a buy-back of \$1 billion worth of shares over the next few years. At a minimum this is a sign that the company is generating more cash than it feels it needs for future expansion. As companies first move to buy back shares and then pay cash dividends, they are indicating that new projects are not offering the same return potential to the company as once was the case. The move could be one sign that Toy Retailer Inc. may be reaching a more mature stage—it may be turning into more of a mature company rather than a growth firm. In such a situation, the price-earnings ratio would contract and a given level of earnings would support a lower price.

In a growth approach, the historical earnings growth rate provides one guide to future growth. But equally important are market expectations concerning future growth rates. Examining the price-earnings ratios is useful to judge market expectations concerning the future growth of the firm.

At 21.2, the current (early-Year 6) price-earnings ratio of Toy Retailer Inc. is edging toward the lower end of its historical range. It is still above the industry average, and close to the market’s Year 5 ratio—which is low for a growth stock. Traditionally, the price-earnings ratio of a growth stock trades above that of the market and the Toy Retailer Inc. ratio has traditionally been about 20% above the market’s. While a low price-earnings ratio can be a sign of an undervalued stock, it can also be a sign that the

market has lowered its expectations for the firm—it may no longer view the company as a true growth stock. It is worthwhile to consider whether the market may be correct in its assessment.

The Year 5 return on equity for Toy Retailer Inc. was below both the long-term average and the industry average. The return on equity measures how well the firm is being run on both an operational and financial basis. To boost return on equity a company must increase the profit margin on goods being sold, make better use of its assets, or increase the level of financial leverage. While the ratio is close to industry norms, the slide in return on equity for Toy Retailer Inc. is surprising in light of the increase in financial leverage. An examination of the profit margin over this time shows an overall decline; battling the competition does have its costs, as does expansion. However, the profit margin has shown an increase lately.

VALUING THE COMPANY

The bottom of the Valuation Worksheet provides valuations using the earnings-based model. Applying the model to Toy Retailer Inc. paints an interesting picture.

The first item that needs to be determined is the appropriate per share earnings figure for Year 6. The worksheet uses an estimate based on the five-year earnings growth rate of 10.9% and the most recently reported earnings per share [$1.65 \times (1 + 0.109)$], leading to a high valuation of \$51.79 and a low valuation of \$33.67. This compares to a current price of \$34.62. Sounds enticing, but let's look at some of the assumptions.

Is the growth rate reasonable? Actually the growth rate used here (10.9%) is somewhat below the rates estimated by other analysts. For instance, Value Line estimates a higher growth rate of 17.5%, while the S&P Earnings Guide projects a growth rate of 18%. Using a higher growth rate would, of course, raise the valuations somewhat.

Of greater concern, however, are the high and low price-earnings ratios based on historical averages. These averages are based on a time period when the company was clearly a growth stock. But as we have seen, there are reasons to question whether the company can continue to be considered a growth firm; the market right now may be raising questions about this.

If Toy Retailer Inc. is valued as a mature stock, its price-earnings ratio would on average parallel the market's. Currently (mid-Year 6), the market's price-earnings ratio is 20.6; using that in the model would produce a valuation of \$37.70 based on the worksheet's Year 6 earnings per share estimate; using Value Line's higher Year 6 earnings per share estimate would produce a valuation of around \$41.

CONCLUSION

Examining different assumptions is a critical part of the valuation, and will help you isolate some of the major factors that are affecting a stock's price.

While the worksheet examines quantitative factors, it is clear that many subjective factors go into the equation. To judge these factors, it is necessary to go beyond the statistics. Any final decision should be based on a better understanding of the company,



its management, and its competitive environment. This can only be accomplished by a thorough reading of the firm's financial reports, as well as the reports and summaries on the firm and its industry.



Appendix C

Screening Stocks With High Growth Potential

The mention of growth investing brings a sparkle to many an investor's eye. Looking for rapidly growing firms in hot industries seems much sexier than picking through the value plays that other investors have cast off. But searching for growth stocks is like all investment techniques—it has its ups and downs. The allure of buying into a stock with the potential for a tenfold increase in price must be balanced with the potential for substantial price declines if the firm fails to meet the market's growth expectations.

This chapter focuses on strategies used to screen a database for growth stocks.

SCREENING FOR GROWTH

Screening can be used as a first step in identifying growth stock prospects. Screening is the process of applying a set of criteria to a set of stocks to filter out those companies that merit more detailed examination. Readers with access to computers can use a number of software programs or Internet services to screen for growth stocks. AAI's *Stock Investor Pro* program was used to perform the screening.

While there are many ways to measure company growth, most investors focus on earnings growth, with an emphasis on a high and expanding rate of growth. A common first screen for growth stocks is to specify an absolute minimum growth level. A minimum annual growth rate of 15% in earnings from continuing operations over the last five years was the first screen applied in our example. In selecting a time period for historical analysis, the economic environment should be kept in mind. True growth companies are expanding throughout the economic cycle. Another consideration is whether the growth rate is sustainable. The market can react harshly to a growth company that misses growth expectations and cannot sustain its growth.

Screening based upon earnings requires a careful analysis of a firm's reports, which can highlight how the growth was achieved. Was the growth due to acquisition or internal expansion? Did currency translation impact on earnings? How are same store sales? To help buffer the impact of extraordinary items on earnings, earnings from continuing operations were used throughout. Looking at sales growth will also provide a confirmation of how earnings were achieved. Over extended periods, a company's earnings growth rate cannot greatly exceed its revenue growth.

SECONDARY GROWTH SCREENS

The next filter applied examined year-to-year earnings per share changes from continuing operations. In screening for growth companies it is important to examine the year-to-year figures for steady and increasing earnings. A screen requiring increased earnings for each of the last five years was specified. If you wish to be more stringent in your screening, you might require an increase in the year-to-year growth rate for each of the last five years. This more stringent screen focuses on the momentum of earnings.

Investors examining growth stocks look toward any signs that a trend in growth may be broken. Quarterly earnings are closely examined and deviations from the expected norm are quickly rewarded or punished. The seasonality of sales and earnings for most firms, however, does not allow investors to compare one quarter to the preceding quarter in a meaningful manner. To deal with seasonality, it is best to compare one quarterly figure to the same quarter one year prior. A decrease from the same quarter one year ago is a warning flag that merits investigation. In our screening process, higher quarterly earnings than the same quarter one year ago for each of the last four quarters was required.

Beyond examining overall growth or momentum, many investors examine how a company compares to its industry peers. The ability to expand within an industry group may point to a firm that has a competitive edge. Therefore, our final growth screen specified the company's earnings growth to be above that of its industry's average.

VIEWING THE RESULTS

The screening used data that was current as of February 29, 2004. To highlight a cross section of companies, the firms passing the screens were divided up into groups based upon market capitalization. The top 15 large-cap, mid-cap and small-cap companies ranked by historical growth in earnings from continuing operations are shown.

Our screen focused on historical performance, but growth stock investors really focus on expected performance. Looking at market consensus forecast figures helps to provide an indication of the expectations surrounding the valuation. It is the company's ability to meet and, more importantly, exceed these expectations that leads to great gains.

The price-earnings ratios for stocks on our list tend to be above the market average, as would be expected for companies with above-average prospects. To better judge price-earnings ratios, many analysts look at price compared to forecasted earnings. For the S&P 500, this brought its high trailing price-earnings ratio of 21.3 back to a more reasonable price-earnings ratio fiscal-year estimate of 17.9.

The 52-week relative strength figures point to a collection of companies that have largely outperformed the market—quite a contrast to the value-based stocks presented in Appendix B. The relative strength figure of -58% for one of these companies, however, reveals the volatility of this group.

Investing in growth stocks can be an extremely rewarding experience. Success, however, requires careful analysis and constant monitoring of the portfolio.

Stocks With High Earnings Growth

Company (Exchange)	EPS Growth Rate		EPS Last 12 Mo (\$)	EPS Current Fiscal Yr Forecast (\$)	P/E Ratio		Hist'l Sales Grth Rate (%)	52-Wk Rel Strength (%)	Industry
	Hist'l Avg (%)	I/B/E/S Est (%)			Trailing 12 Mo (X)	Fiscal Yr Est (X)			
Large Cap (above \$5 billion)									
Univ. of Phoenix Online (Nq)	82.4	32.5	1.17	1.42	73.7	56.6	63.7	58	Schools
eBay Inc.* (Nq)	77.3	37.5	0.70	1.08	102.5	63.6	90.6	29	Retail (Spec. Non-Apparel)
Forest Laboratories* (NY)	73.3	20.8	2.12	1.94	36.8	38.9	36.5	11	Biotechnology & Drugs
Infosys Technologies (Nq)	69.9	29.2	3.76	2.04	22.7	41.2	61.6	0	Software & Programming
UnitedHealth Group* (NY)	67.2	16.9	3.10	3.74	20.9	16.6	10.7	10	Insurance (Acc. & Health)
Quest Diagnostics* (NY)	56.5	17.8	4.22	4.75	20.1	17.4	26.6	15	Healthcare Facilities
L-3 Comm. Hldgs. (NY)	52.1	14.8	2.71	3.35	19.7	16.0	41.6	9	Communications Equip.
Stryker Corp* (NY)	49.0	18.8	2.28	2.69	39.8	33.0	26.9	0	Medical Equip. & Supplies
Coach, Inc. (NY)	46.9	19.1	1.09	1.24	37.7	32.0	12.8	63	Apparel/Accessories
Lennar Corp. (NY)	44.9	16.2	4.83	5.22	10.7	9.5	41.2	48	Construction Services
Apollo Group* (Nq)	37.4	24.4	1.46	1.72	52.9	44.3	28.3	21	Schools
Lab. Corp. of Amer (NY)	35.3	16.3	2.23	2.51	17.6	15.6	12.8	4	Healthcare Facilities
D.R. Horton Inc. (NY)	34.4	15.8	3.08	3.29	10.6	9.7	32.0	91	Construction Services
AmerisourceBergen* (NY)	34.4	15.2	4.12	4.13	14.5	14.1	39.2	-22	Biotechnology & Drugs
Varian Medical Sys. (NY)	34.3	21.6	2.04	2.23	42.9	37.6	14.0	22	Medical Equip. & Supplies
S&P 500	6.8	11.5	na	na	21.3	17.9	5.7	0	
Mid Cap (\$1 billion to \$5 billion)									
Career Education Corp. (Nq)	32.0	25.2	1.03	1.57	42.6	31.7	56.7	57	Schools
Ross Stores, Inc. (Nq)	16.5	15.1	1.39	1.47	23.4	21.8	12.2	38	Retail (Apparel)
Commerce Bancorp (NY)	29.5	17.1	2.74	3.12	23.2	19.4	23.0	8	Regional Banks
Patterson Dental (Nq)	22.6	18.0	2.03	2.17	33.7	31.2	16.3	13	Medical Equip. & Supplies
Trend Micro Inc. (Nq)	84.4	na	0.64	na	47.9	na	37.6	33	Software & Programming
BlackRock, Inc. (NY)	33.3	15.5	2.40	2.87	25.2	20.7	12.0	5	Investment Services
Chico's FAS, Inc. (NY)	82.1	24.8	1.05	1.13	41.9	37.8	47.8	74	Retail (Apparel)
RenaissanceRe Holdings (NY)	50.6	9.6	8.76	6.45	6.2	8.2	39.3	5	Insurance (Prop. & Casualty)
Doral Financial Corp. (NY)	36.8	21.7	2.79	3.44	12.5	9.9	24.7	16	Regional Banks
CarMax, Inc. (NY)	36.3	19.2	1.09	1.10	31.8	30.9	35.3	66	Retail (Spec. Non-Apparel)
UTStarcom, Inc. (Nq)	89.4	23.1	1.96	1.91	20.2	17.3	79.6	34	Communications Services
C.H. Robinson Worldwide (Nq)	21.0	15.0	1.35	1.51	29.8	26.2	12.1	-5	Misc. Transportation
NetScreen Tech. (Nq)	20.4	25.1	0.68	0.60	56.3	59.1	222.8	33	Communications Equip.
Michaels Stores (NY)	32.2	17.1	2.36	2.52	21.3	19.1	14.4	50	Retail (Spec. Non-Apparel)
Toll Brothers (NY)	25.5	15.4	3.68	4.19	12.8	10.5	18.0	67	Construction Services
S&P MidCap 400	7.9	13.5	na	na	22.8	19.4	9.3	8	

(continued on next page)

Stocks With High Earnings Growth (continued)

Company (Exchange)	EPS Growth Rate		EPS Last 12 Mo (\$)	EPS Current Fiscal Yr Forecast (\$)	P/E Ratio		Hist'l Sales Grth Rate (%)	52-Wk Rel Strength (%)	Industry
	Hist'l Avg (%)	I/B/E/S Est (%)			Trailing 12 Mo (X)	Fiscal Yr Est (X)			
Small Cap (below \$1 billion)									
Meritage Corporation (NY)	26.2	12.3	7.24	7.76	10.9	9.5	41.7	72	Construction Services
Wintrust Financial (Nq)	32.8	16.9	2.11	2.33	24.2	20.6	18.3	20	Regional Banks
Knight Transportation (Nq)	18.9	19.3	0.95	1.11	26.1	21.9	22.2	-8	Trucking
BankUnited Financial (Nq)	28.7	12.2	1.48	1.51	19.8	18.2	8.6	15	S&Ls/Savings Banks
Odyssey Healthcare (Nq)	40.5	21.7	0.87	1.04	25.8	20.9	58.8	3	Healthcare Facilities
Headwaters Inc. (Nq)	25.8	23.0	1.41	1.54	17.5	15.4	181.3	25	Coal
Renaissance Learning (Nq)	23.9	20.0	1.05	1.05	24.3	24.3	18.8	11	Software & Programming
i-CABLE Comm. (Nq)	15.8	10.0	0.13	0.28	58.1	27.0	15.4	10	Broadcasting & Cable TV
FirstFed Financial (NY)	18.3	9.5	3.80	3.69	11.7	11.8	-4.0	6	S&Ls/Savings Banks
CUNO Inc. (Nq)	32.1	14.6	1.62	1.81	25.8	23.6	7.7	-9	Misc. Capital Goods
AmSurg Corp. (Nq)	127.5	21.5	1.41	1.76	23.5	19.7	34.4	5	Healthcare Facilities
Shuffle Master, Inc. (Nq)	46.4	22.5	1.01	1.23	39.3	33.9	20.0	57	Casinos & Gaming
Harbor Florida Banc. (Nq)	23.7	18.0	1.68	1.73	17.5	16.7	7.2	-14	S&Ls/Savings Banks
FTI Consulting (NY)	27.8	16.6	1.73	1.28	10.6	12.8	38.4	-58	Business Services
ManTech International (Nq)	32.2	17.6	1.02	1.09	20.5	19.2	11.8	-1	Software & Programming
S&P SmallCap 600	4.4	14.3	na	na	22.7	19.8	8.9	11	

*S&P 500 stock

Exchanges: NY = New York Stock Exchange; A = American Stock Exchange; Nq = Nasdaq; OTC = Over-the-Counter

Source: Stock Investor Pro/Market Guide, I/B/E/S. Data as of February 29, 2004.

Definitions of Screens and Terms

EPS Growth Rate—Historical Average: Annual growth in earnings per share from continuing operations over the last five fiscal years. A measure of how successful the firm has been in generating the bottom line, net profit.

EPS Growth Rate—I/B/E/S Est.: The median growth rate in earnings per share from continuing operations over the next five years that is being forecasted by analysts as reported by I/B/E/S, a firm that surveys analysts. An indication of the consensus in earnings growth expectations for the firm.

EPS Last 12 Mo.: Earnings from continuing operations for the most recent 12 months divided by the number of common shares outstanding.

EPS Current Fiscal Yr. Forecast: Earnings from continuing operations for the current fiscal year of the company that is being forecasted by analysts as reported by I/B/E/S.

Price-Earnings Ratio—Trailing 12 Mo.: Market price per share divided by most recent 12

months' earnings per share from continuing operations. A measure of the market's expectations regarding the firm's earnings growth and risk. Firms with very high price-earnings ratios are being valued by the market on the basis of high expected growth potential.

Price-Earnings Ratio—Fiscal Yr. Est.: Market price per share divided by earnings per share from continuing operations that is being forecasted by analysts as reported by I/B/E/S, a firm that surveys analysts.

Historical Sales Growth Rate: Annual growth in total sales per share over the last five fiscal years for the firm. Used to provide a confirmation of the quality of the historical earnings per share growth rate.

52-Week Relative Strength: The price performance of a stock during the last year relative to the performance of the S&P 500. A figure of 0% indicates the stock had the same percentage price performance as the market. A figure of 5% indicates that the stock outperformed the market by 5%.



Investing in Utilities for Income and Growth

Most investors look to utility stocks primarily for yield, with some expectation of share price increase. While utilities in the past have been viewed as staid, the industry is facing stiffer challenges from non-regulated sources, a tougher regulatory environment, and deregulation in certain areas.

Although growth prospects are limited, they do exist. Growth from a total return viewpoint—including both capital gains and dividends—usually emerges when a utility is positioned in an area with significant population growth, when it has deftly sidestepped the pitfalls of new plant construction, when it has diversified into non-regulated businesses that may prosper, or even during potential takeover situations, which are increasingly common in the utility sector.

COMPANY CHARACTERISTICS

The average utility is still purchased for the dividend flow, which is usually two to three times the dividend yield of the average industrial stock. This yield component makes them competitive with bonds, and as such they are affected by changes in interest rates. In addition, the industry is highly leveraged, and interest costs consequently play a large role in the earnings equation. The combination of these two factors makes utilities highly interest-rate sensitive: When interest rates fall, utilities rise in price, and when rates rise, utility prices suffer.

While the utility sector generally has lower risks, calamities do occur beyond the rare nuclear plant meltdown—construction delays and cost overruns, adverse regulatory decisions, failures in non-regulated businesses, unusual weather conditions affecting demand, and economic busts in single-industry dominated areas. Dividend cuts or suspensions on a stock bought primarily for dividend yield can be devastating.

Utility stocks are often recommended as defensive investments in times of economic uncertainty. The reasoning: If the economy turns down, the demand for electricity, gas, and water may decline somewhat for industrial users, but overall demand will not suffer significantly. Couple that with the likely decline in interest rates in an economic slowdown, and utility stocks can be expected to buck the trend of declining stock prices.

Conversely, interest rates tend to rise during expansions, and utility stocks tend to decline in this stage.

Many utilities offer dividend reinvestment programs, which provide investors with a

low-transaction-cost method of reinvesting dividend payments; some plans also allow additional cash investments. The existence of a dividend reinvestment plan is an added investor benefit, but stock selection decisions should be based on fundamental merits.

THE INITIAL LIST

For the beginning investor, there are several sources from which you can draw your initial list of promising utilities. Most of these sources are inexpensive, and may also be available in your local library. Keep in mind that these sources are useful primarily for the initial list. In addition, several are published annually, so the information may become dated. However, they do provide a starting point to narrow your search.

For computer users, an initial list of candidates can be compiled by applying various screens to a database of stocks. Appendix D discusses screens that are useful in analyzing utilities.

In using these lists and screens when searching for utilities, keep in mind that you are concentrating on an industry, but one that has several components: natural gas distributors, water companies, and electric utilities. Diversifying among these components—as well as geographically—reduces some of the risks specific to the particular industry sector.

For most investors, utilities are primarily income plays. That means focusing not only on dividend yield but also on consistent dividend payments. A high ranking for earnings and dividend growth and stability, or a high rating for dividend safety by one of the information sources can narrow the selection.

Once a list of candidates is established, the next step is to perform an in-depth evaluation.

UTILITY CORP.: AN EXAMPLE

Utility Corp. offers a good example of how the approach can be applied to utilities, with an above-average ranking for relative dividend safety, dividend increases consistently over the past 10 years, and a high S&P earnings and dividend ranking (A-) with above-average appreciation potential.

Utility Corp. is a holding company for Utility Co., which provides electricity (74% of its revenues) and gas (26% of revenues) to a southern state. Its fuels for generating electricity are coal (71%, according to Value Line), nuclear power (22%), and hydroelectric power (7%).

As with many utilities at the time, earnings growth projections were not stellar, due to little room for growth in its consumer base and a few uncertainties on the regulatory front. On the other hand, Utility Corp.'s expansion into non-regulated activities brought some promise to the earnings picture.

The completed valuation worksheet for Utility Corp. is shown on page 49. Value Line was used as the source of both company and industry information.

Entering the per share data from an information source is relatively straightforward, but it is important to stick to the same source for company information, since reporting

Drawing Up an Initial List: Sources of Information

Mergent's Handbook of Dividend Achievers, yearly edition

Mergent Inc., 580 Kingsley Park Dr., Fort Mill, S.C. 29715, 800/342-5647, www.mergent.com. The book includes information on over 300 companies that have increased their dividends consistently over the past 10 years, many of which are utilities. The listings include a company's dividend achiever rank, as well as the company's dividend growth rate for the latest 10-year period. The book also provides full-page data summaries on each dividend achiever.

Standard & Poor's 500 Guide, yearly edition

Published by McGraw-Hill, P.O. Box 182604, Columbus, Ohio 43272, 800/262-4729, www.mcgraw-hill.com. Includes this list:

Increasing Dividends for Ten Years: Firms that have paid higher cash dividends in each of the past 10 years and whose current dividend yield is at least 2%, indicating healthy finances and capable management.

These annual guides include the full-page data pages found in the S&P Stock Reports; since they are published annually, the data can be dated.

Standard & Poor's Industry Surveys

Standard & Poor's Corp., 55 Water St., New York, N.Y. 10041, 800/221-5277, www.standardandpoors.com. This monthly reviews of over 50 industries; utilities are divided into: electric utilities, natural gas, and water suppliers. In the back of the industry reports are one-line listings for the selected companies within each industry, allowing for comparison of the various firms listed relative to others in the same industry. For each stock, the S&P's earnings and dividend rank and S&P's evaluation of its investment potential (using their Stock Appreciation Ranking System) are included, which allow easy selection and comparison.

Value Line Investment Survey

Value Line Publishing Inc., 220 E. 42nd St., New York N.Y. 10017-5891, 800/634-3583, www.valueline.com. Part 1 Summary & Index:

The tables in the back (see index for the page numbers) include several useful lists from which to draw prospects:

Conservative Stocks: Stocks ranked high by Value Line for relative safety.

Highest Yielding Stocks: This consists almost entirely of utilities, ranked by yield, based on estimated year-ahead dividends per share.

Stock With Highest Projected 3- to 5-Year Dividend Yield: These rankings are based on the projected dividends per share in three to five years, divided by recent price.

Widest Discount from Book Value and Lowest P/Es: Both of these lists may contain a smattering of utilities that may be good prospects.

services make different adjustments to the data they provide.

PER SHARE INFORMATION

The first item that may strike you is that the May 31, Year 6, stock price had fallen nearly 18% recently from its all-time highs in Year 5. This price drop reflected the overall decline that utilities faced due to rising interest rates at the time. On the other hand, Utility Corp.'s drop was much less than the industry's as a whole.

Next, it is important to examine the year-by-year earnings per share figures. Are they steadily increasing, or has there been a change in trend? Utility Corp.'s earnings only slowly increased, except for Year 4, when they dropped due primarily to increases in certain expenses. While Year 5's earnings appear much higher, Value Line reports that earnings were inflated due to a particularly hot summer. As a result, Value Line's projected earnings for Year 6 are slightly below Year 5 earnings, assuming normal weather conditions.

Dividends, on the other hand, increased only modestly every year. The five-year average growth rate is 2.7%.

In examining a utility, it is useful to compare the average growth rate in earnings relative to the average growth rate in dividends. This provides a measure of the potential stability and growth of the dividend, since over the long term, dividends cannot continue to grow faster than earnings. While both the growth rates for Utility Corp. are modest, the five-year average earnings growth rate is above the five-year average dividend growth rate.

LOOKING AT THE FINANCIAL RATIOS

Dividend concerns tend to drive the prices of utility stocks. Not surprisingly, Utility Corp.'s dividend yield was high, at 6.4% as of mid-Year 6, compared to the market's yield of 2.9%. However, it is not high relative to the industry's 7% yield (for the Dow utility average), and it is near its historical low of 6.2%. Higher than average dividend yields are not necessarily an indication of a good value (high dividends at a low price); rather, they may indicate that the market feels the dividend is in jeopardy.

The payout ratio (dividends per share divided by earnings per share) also helps gauge the strength of the dividend: The lower the payout ratio, the better, implying that the dividend payment is more secure. A 100% payout ratio shows that a firm is paying out all of its earnings to its shareholders. The payout ratio for Utility Corp., 73.3% in Year 5, is near the industry average of 79%.

Financial leverage is another indication of dividend safety. Heavy debt loads saddle a company with required cash outflows to bondholders, who must be paid before dividends can be paid to shareholders. Utilities tend to be heavily leveraged, and interest costs have a major impact on a utility's bottom line earnings. Utility Corp.'s use of financial leverage, while high at 50.2% in Year 5, is average for the industry.

The Year 5 return on equity of 13% for Utility Corp. was close to its long-term average and slightly above the industry's 11.6%. The return on equity measures how well

Valuation Worksheet

Company: Utility Corp. Current Price \$ 43.88 Date (5 / 31 / Year 6)

Ticker _____ Exchange _____ Current P/E 11.6 Current Yield 6.4%

Financial Statement & Ratio Analysis

Per Share Information	Company						Industry or Competitor	Market	
	Year 1	Year 2	Year 3	Year 4	Year 5	5-Year Avg	Year 5	5-Year Avg	Year 5
	Price: High	35.80	35.80	44.30	44.80	52.30			
Price: Low	29.60	30.30	33.50	38.60	40.10				
Earnings per Share (EPS)	3.04	3.31	3.37	2.84	3.72	growth rate: 5.2%			
Dividends per Share (DPS)	2.46	2.52	2.62	2.68	2.74	growth rate: 2.7%			
Book Value per Share (BV)	22.79	24.56	25.23	26.46	28.59				

Financial Ratios

Price-Earnings Ratio (P/E): Avg	10.8	10.0	11.5	14.7	12.4	11.9	14.2	12.6	21.3
High (High Price ÷ EPS)	11.8	10.8	13.1	15.8	14.1	13.1			
Low (Low Price ÷ EPS)	9.7	9.2	9.9	13.6	10.8	10.6			
Dividend Yield % (DY): Avg	7.6	7.6	6.9	6.4	6.0	6.9	5.5	6.3	2.7
High (DPS ÷ Low Price)	8.3	8.3	7.8	6.9	6.8	7.6			
Low (DPS ÷ High Price)	6.9	7.0	5.9	6.0	5.2	6.2			
Payout Ratio % (DPS ÷ EPS)	80.9	76.1	77.7	94.4	73.3	80.5	79	82	
Return on Equity % (EPS ÷ BV)	13.3	13.5	13.4	10.7	13.0	12.8	11.6	11.2	
Financial Leverage %	49.8	46.2	50.1	49.2	50.2	49.1	49.0	49.9	

Year 1 data is oldest; Year 5 is the most recent.

Valuation Estimates

Model based on earnings:

Average high P/E × estimated Year 6 EPS: $\frac{13.1}{1} \times \frac{3.60}{1} = \frac{\$47.16}{1}$ (high valuation estimate)

Average low P/E × estimated Year 6 EPS: $\frac{10.6}{1} \times \frac{3.60}{1} = \frac{\$38.16}{1}$ (low valuation estimate)

Model based on dividends:

Estimated Year 6 annual DPS ÷ average low DY: $\frac{2.82}{1} \div \frac{0.062}{1} = \frac{\$45.48}{1}$ (high valuation estimate)

Estimated Year 6 annual DPS ÷ average high DY: $\frac{2.82}{1} \div \frac{0.076}{1} = \frac{\$37.11}{1}$ (low valuation estimate)

Use decimal form for DY. For instance 5.4% would be 0.054.

the firm is being run on both an operational and financial basis. For regulated utilities, return on equity is a function of the allowable rate of return, cost structure, and use of financial leverage. Utility Corp.'s use of financial leverage is relatively unchanged. It appears that the firm has instead been able to increase its competitive edge.

VALUING THE COMPANY

The bottom of the valuation worksheet provides valuations using both the earnings-based model and dividend-based model.

The first item that needs to be determined is the appropriate per share earnings figure for Year 6. The worksheet uses the Value Line estimate of \$3.60. This produces a lower figure than an estimate based on the five-year earnings growth rate of 5.2% and the most recently reported earnings per share of \$3.72. The five-year growth rate is based on Year 5 earnings that, according to Value Line, were high due to extraordinary weather conditions; the Value Line estimate for Year 6 earnings per share is more conservative, and in line with other analysts' estimates as reported by S&P. Using the Value Line estimates leads to a high valuation estimate of \$47.16 and a low valuation estimate of \$38.16.

Determining the appropriate dividends per share figure for Year 6 is somewhat easier since dividends tend to be more stable. Using the five-year growth rate to project next year's dividend produces a \$2.81 estimate [$\$2.74 \times (1 + 0.027)$], almost identical to Value Line's projection of \$2.82. Using the Value Line figure in the dividend model produces a high valuation estimate of \$45.48 and a low valuation estimate of \$37.11.

The mid-Year 6 price of Utility Corp. was \$43.88, which falls in between the two valuations—neither a screaming buy, nor an obvious sell. But remember, this is a utility.

Utility Corp. offers a dividend reinvestment plan, and allows investors to buy initial shares directly from the firm.

CONCLUSION

The current level of the dividend, the expected growth and the safety of the dividend payment, and the overall interest rate environment drive the prices of utility stocks. Examining these features is critical in your evaluation. The valuation models will most likely not turn up any startling results. But what you are looking for is high income with some growth potential at a fair price.

While the worksheet examines quantitative factors, it is clear that many subjective factors go into the equation. To judge these factors, it is necessary to go beyond the statistics. Any final decision should be based on a better understanding of the company, its management, and its competitive and regulatory environment. The box on the following page provides a summary of these factors. However, a full understanding can only be accomplished by a thorough reading of the firm's financial reports, as well as the reports and summaries on the firm and its industry.

Some Factors to Consider When Evaluating a Utility

Company factors	Questions to ask:
Type of Utility Electric Gas Water	Is the utility diversified or of one particular type? Diversification among various types of utilities helps reduce some of the risks of investing in this sector. Are there changes in the competitive or regulatory environment that may affect a particular type of utility?
Customer Base Residential Commercial Industrial	Does any one predominate? Is the population growing, with the potential for an expanding residential base? Are there external factors (for instance, extraordinary weather conditions, or an economic downturn) that may affect industrial or commercial use?
Power Source Nuclear Coal Gas Oil Hydroelectric	Does any source of power predominate? What factors affect the cost of the power sources? Items to look for include the age of a nuclear plant; type of coal used and where it is obtained; the price and supply of oil; weather patterns that may affect hydroelectric power.
Other Factors Non-regulated businesses Management Technology	Is the utility moving into non-regulated businesses, and if so, how risky and how promising are they? Is there potential for reducing operating costs by better management and/or new technology?
External factors	Questions to ask:
Economic Interest rate outlook Business cycle	What is the outlook for interest rates? Rising rates affect the cost of borrowing, a major cost to utilities. What stage in the cycle is the economy? A sagging economy can affect industrial and commercial use.
Regulatory Federal State	What laws and regulations may affect the industry? On the national level, federal laws concerning the environment may affect some utilities more than others. At the state level, where utility rates are controlled, what is the regulatory mood?

Appendix D



Screening Utility Stocks

Utility stocks have traditionally been a mainstay in the portfolio of a conservative investor looking for the benefit of high dividend payouts that keep up with inflation over time. But what was once thought of as a stodgy, safe investment has gone through some difficult times (see Enron).

This chapter covers screens for high-yielding utility stocks and discusses some of the concerns in determining if they merit further analysis.

Many investors turn toward the dividend yield as a measure of value in their quest for selecting underpriced securities. A stock's dividend yield is computed by taking the indicated dividend—the most recent quarterly dividend multiplied by four—and dividing it by the share price. Like all basic value-oriented techniques, the dividend yield strategy attempts to identify investments that are incorrectly out of favor. Contrarian techniques such as this are based on the premise that markets tend to overreact to information—both to the upside and downside—and push the price of a security away from its true intrinsic value. The danger with such a strategy is that a dividend cut may occur, hurting the stock price.

The screening for the high-yielding utility dividend stocks began with a database of approximately 8,000 companies, trusts, and closed-end funds found in *Stock Investor Pro*. The first filter excluded non-utility firms, leaving a group of 152 stocks (using data as of February 29, 2004).

We then screened for utilities that have paid a dividend for each of the last five years and never reduced their dividend. Dividend levels are set by the board of directors based upon considerations of the current company, industry, and economic condition. Because dividend cuts are tantamount to an announcement that the firm is financially distressed, dividends are set at base levels that the company should be able to afford throughout the economic cycle. The filter requiring seven years of steady or increasing dividends cut the number of stocks down to 66.

The next requirement was that earnings per share from continuing operations be positive for the last 12 months. This screen cut out just three utilities. The last screen required that the firm's dividend yield be higher than its respective narrow industry group average. The final screen brought the number of utilities down to 43.

To show a cross section of the stocks and highlight any differences that company size might have, the stocks were divided up into three groups based upon market capitalization and the top 15 dividend-yielding stocks for each group are listed. Note however that only 11 large-cap stocks made the listing.

The impact of market capitalization can be seen by the types of utilities that make up

High-Yielding Utility Stocks

Company (Exchange)	Div Yield (%)	5-Yr Avg Yield (%)	Indic'd Div (\$)	Hist Div Grth Rate (%)	EPS Growth Rate Hist Avg (%)	I/B/E/S Est (%)	Payout Ratio Trailing EPS (%)	I/B/E/S Est (%)	Industry
Large Cap (above \$5 billion)									
Kinder Morgan Energy (NY)	5.9	7.1	2.72	16.2	13.7	9.0	132	128	Natural Gas Utilities
Ameren Corporation (NY)	5.4	6.5	2.54	0.0	2.2	3.3	78	88	Electric Utilities
DTE Energy Company (NY)	5.1	5.3	2.06	0.0	5.9	4.2	70	62	Electric Utilities
Progress Energy (NY)	5.0	5.2	2.30	2.9	4.3	4.0	69	64	Electric Utilities
Cinergy Corp. (NY)	4.8	5.9	1.88	0.4	8.0	3.8	69	68	Electric Utilities
Public Service Enterprise (NY)	4.7	5.7	2.20	0.0	-3.8	4.2	38	59	Electric Utilities
KeySpan Corporation (NY)	4.7	5.5	1.78	0.0	1.4	5.3	70	68	Natural Gas Utilities
Southern Company (NY)	4.6	4.8	1.40	0.9	5.4	4.0	66	71	Electric Utilities
Dominion Resources (NY)	4.1	4.9	2.58	0.0	17.5	5.5	95	52	Electric Utilities
FirstEnergy Corp. (NY)	3.9	5.1	1.50	0.0	2.0	4.1	162	55	Electric Utilities
FPL Group, Inc. (NY)	3.8	3.8	2.48	3.9	2.4	4.4	48	49	Electric Utilities
Average	4.7	5.4	2.13	2.2	5.4	4.7	81	69	
Mid Cap (\$1 billion to \$5 billion)									
Nicor Inc. (NY)	5.1	4.9	1.86	4.7	0.6	3.7	79	83	Natural Gas Utilities
DPL Inc. (NY)	4.8	4.5	0.96	0.0	-1.7	4.5	74	71	Electric Utilities
Great Plains Energy Inc. (NY)	4.8	na	1.66	0.5	11.6	3.2	66	74	Electric Utilities
Peoples Energy Corp. (NY)	4.8	5.5	2.16	2.0	5.0	5.0	73	77	Natural Gas Utilities
Hawaiian Electric Ind. (NY)	4.7	6.6	2.48	0.3	2.1	2.9	89	80	Electric Utilities
Pinnacle West Capital (NY)	4.6	3.8	1.80	7.6	-1.6	4.2	148	67	Electric Utilities
Vectren Corp. (NY)	4.6	na	1.14	4.0	9.2	6.8	71	67	Natural Gas Utilities
WPS Resources Corp. (NY)	4.6	6.1	2.18	2.0	13.0	4.0	74	67	Electric Utilities
Atmos Energy Corp. (NY)	4.6	5.1	1.22	2.5	-1.5	5.7	70	78	Natural Gas Utilities
WGL Holdings, Inc. (NY)	4.4	4.8	1.28	1.3	8.4	3.9	63	72	Natural Gas Utilities
Energy East Corp. (NY)	4.3	4.2	1.04	6.5	2.2	4.5	50	61	Electric Utilities
NSTAR (NY)	4.3	4.9	2.22	2.5	2.3	4.3	59	63	Electric Utilities
National Fuel Gas (NY)	4.3	4.2	1.08	3.6	40.6	4.3	46	64	Natural Gas Utilities
Piedmont Natural Gas (NY)	4.0	4.5	1.66	5.2	2.5	5.0	74	71	Natural Gas Utilities
IDACORP, Inc. (NY)	3.8	5.7	1.20	0.0	-6.7	5.0	181	65	Electric Utilities
Average	4.5	5.0	1.60	2.8	5.7	4.5	81	71	

(continued on next page)

High-Yielding Utility Stocks (continued)

Company (Exchange)	Div Yield (%)	5-Yr Avg Yield (%)	Indic'd Div (\$)	Hist Div Grth Rate (%)	EPS Growth Rate		Payout Ratio		Industry
					Hist Avg (%)	I/B/E/S Est (%)	Trailing EPS (%)	I/B/E/S Est (%)	
Small Cap (below \$1 billion)									
UIL Holdings Corp. (NY)	6.0	6.5	2.88	0.0	-8.3	1.0	177	123	Electric Utilities
Empire District Elect (NY)	5.6	6.0	1.28	0.0	-1.6	2.0	99	96	Electric Utilities
Unitil Corporation (A)	5.2	5.0	1.38	0.6	-6.9	na	98	na	Electric Utilities
RGC Resources Inc. (Nq)	5.0	5.6	1.14	1.5	2.0	na	65	na	Natural Gas Utilities
Delta Natural Gas (Nq)	4.6	6.1	1.18	0.7	7.5	4.0	74	100	Natural Gas Utilities
Cascade Natural Gas (NY)	4.5	5.1	0.96	0.0	0.0	4.0	103	72	Natural Gas Utilities
CH Energy Group (NY)	4.4	5.3	2.16	0.0	-0.9	na	78	79	Electric Utilities
naLaclede Group, Inc. (NY)	4.4	na	1.36	0.3	2.9	4.0	74	74	Natural Gas Utilities
MGE Energy, Inc. (Nq)	4.3	5.5	1.35	0.8	3.8	na	69	na	Electric Utilities
Chesapeake Utilities (NY)	4.3	5.6	1.10	2.5	-2.3	3.0	77	76	Natural Gas Utilities
Black Hills Corp. (NY)	4.1	3.7	1.24	4.1	9.4	5.6	50	60	Electric Utilities
Northwest Natural Gas (NY)	4.1	5.0	1.30	0.8	na	4.9	78	68	Natural Gas Utilities
Otter Tail Corp. (Nq)	4.1	4.2	1.10	2.4	4.7	5.0	71	67	Electric Utilities
American States Water (NY)	3.6	3.8	0.88	0.9	5.2	3.0	78	80	Water Utilities
Middlesex Water (Nq)	3.3	3.7	0.66	2.4	2.0	7.0	93	96	Water Utilities
Average	4.5	5.1	1.33	1.1	1.3	4.0	86	83	

Exchanges: NY = New York Stock Exchange; A = American Stock Exchange; Nq = Nasdaq; OTC = Over-the-Counter

Source: Stock Investor Pro/Market Guide, I/B/E/S. Data as of February 29, 2004.

each segment. Traditionally, a substantial capital investment was required to produce electricity in an economical and stable fashion. Most of the large-cap stocks are electric utilities. The medium-cap stocks are a mix of electric and gas utilities. The small-cap stock section is the most varied, with a couple of water utilities mixed in with electric and gas utilities.

The yields of these utilities are high by any measure. All of these utilities have yields above the 3.2% average for the Dow Jones utilities average at the time of the screen.

Yields this high look very attractive on the surface, but before a company can be considered promising, the security of the dividend must be examined. A high dividend yield indicates that the market feels that the future of the dividend is risky. A high dividend yield is promising only if the dividend level can be sustained and hopefully increased.

The historical dividend growth rate indicates that, even though all the stocks have maintained their dividends, the five-year dividend growth rate has been anemic, except

for a few natural gas stocks. The dividend growth rate should exceed the rate of inflation to provide real dividend growth and stock price increases over time.

Looking at earnings growth helps to show the company's ability to increase dividends. Over time, dividends cannot grow faster than earnings. The historical earnings growth for about one quarter of these utilities has been negative. While the estimates for future earnings of all the firms were positive, the levels of growth were low. Looking at future earnings prospects helps to determine the ability of the company to meet and expand the dividend.

Beyond earnings growth, the payout ratio is the most common measure of a firm's ability to sustain dividends. It is calculated by dividing the dividend per share by earnings per share. Generally the lower the number, the more secure the dividend. Traditionally for utilities, any ratio above 80% is considered a warning flag. The payout ratio for

Definitions of Screens and Terms

Dividend Yield: Indicated annual dividend divided by market price.

Indicated Annual Dividend: Most recent quarterly dividend multiplied by four. Indicates the annual cash flow per share that is expected over the next year.

Five-Year Average Yield: Average company dividend yield during the last five years.


Historical Dividend Growth Rate: The compound annual growth rate in dividends over the last five years. An indication of past company strengths and dividend payment policy. Can be compared with the rate of inflation to provide an indication of real growth in dividends.

EPS Growth Rate—Historical Average: Annual growth in earnings per share from continuing operations over the last five fiscal years. A measure of how successful the firm has been in generating the bottom line, net profit. Used here in comparison with the annual growth rate in dividends per share: Over the long term, dividends cannot grow faster than earnings.

EPS Growth Rate—I/B/E/S Estimate: The median growth rate in earnings per share from continuing operations over the next five years that is being forecasted by analysts as reported by I/B/E/S, a firm that surveys analysts. An indication of the consensus in earnings growth expectations for the firm. This helps to indicate the potential to increase dividends in the future.

Payout Ratio—Trailing EPS: Dividends per share for the last 12 months divided by earnings per share for the last 12 months. Provides an indication of the safety of the dividend. Figures between 0% and 80% are considered safe for utilities. Figures ranging between 80% and 100% are early warning flags. Negative values and values above 100% are considered red flags for a dividend cut if the levels persist. Beyond examining a single year, look for trends.

Payout Ratio—I/B/E/S Estimate: Indicated dividend divided by earnings estimate as reported by I/B/E/S, a firm that surveys analysts, for current fiscal year. Provides an indication of the safety of future dividends.



the Dow Jones utility group at the time of screening was 61%, versus 40% for the Dow Jones industrial group.

The payout ratios for these utilities are at the high end. Beyond looking at payouts based upon historical earnings, it is helpful to compare the current indicated dividend to the expected earnings per share, which is shown in the I/B/E/S payout ratio estimate. It is the expectation of future earnings that drives dividend-setting policies.

The utility market is becoming more complex. The results of the screen showed that a number of high-yielding utilities existed at that time and could reward the investor with a significant current income plus the potential for capital gain. The risks for this group are above average, and a great deal of careful analysis must be performed before any utility should be added to your portfolio.



Investing in Low P/E Stocks

A strategy that focuses on low price-earnings ratios is a value approach that can help you find stocks with hidden or undiscovered potential for significant price appreciation, provided you are correct in your assessment of the firm and the market eventually comes to agree with you. This strategy can produce more income in the form of dividends than other strategies, and it tends to be less volatile; on the other hand, it requires patience, since it can take time for the market to recognize value.

STOCK CHARACTERISTICS

Value investors are searching for undervalued companies—firms whose stocks are selling at prices below their true per share “worth.” How do you measure worth? One measure focuses on the amount of earnings that will be generated by the firm in the future on each share of stock.

A stock’s price-earnings ratio—its share price divided by the most recent 12-months’ earnings per share—embodies the market’s expectations of a company’s ability to generate earnings. If the market has low earnings growth expectations for the firm or it views earnings as uncertain, it will not be willing to pay as much per share as it would for a firm with high earnings growth expectations. The share price on these firms is bid down, and the result is a low price-earnings ratio.

That doesn’t mean that all stocks with low price-earnings ratios have little or no growth potential. While many do, indeed, deserve their low ratios, value investors hope to identify firms that the market has misjudged—firms that really do have potential and whose stocks are undervalued either out of neglect or due to a market overreaction to bad news.

Stocks that have low price-earnings ratios may be in out-of-favor industries, or in cyclical industries that are in their down phase. In addition, they may have other traits indicating their out-of-favor status, including high dividend yields (if the firm pays dividends) and low price-to-book-value ratios (book value per share is total assets less all liabilities divided by shares outstanding and is a measure of the firm’s net worth per share).

These stocks also tend to be less volatile, since bad news is already reflected in their relatively low prices. On the other hand, it may take considerable time for the market to recognize value, and of course, there is the risk that the market was right in its assessment after all.

Drawing Up an Initial List: Sources of Information

Standard & Poor's Earnings Guide

Standard & Poor's Corp., 55 Water St., New York, N.Y. 10041, 800/221-5277,
www.standardandpoors.com.

(Monthly) Includes summary (one-line) information and focuses on earnings and earnings growth estimates. The front includes short useful lists, some of which appear each month and some of which appear periodically.

Strong EPS & Dividends to P/E Ratio: This is a value measure that compares earnings growth (earnings growth and the dividend yield) to the price-earnings ratio. Inclusion is limited to firms that pay dividends and have five years of positive earnings.

Potential Value Plays: These firms are selling at a discount to net tangible book value, a maximum price-earnings ratio (based on next year's earnings estimates) of 15 and a projected 10% increase in earnings.

Low Rank, Low Price, Estimates Up: These firms have low rankings, indicating a history of disappointing earnings and dividend payments, and all suffered losses in the previous year. However, they are expected to be profitable in the current year and show strong earnings gains by the next year.

Forward Growth and Low P/Es: These firms are selling at price-earnings ratios of less than 12 based on next year's earnings estimates, but earnings are expected to increase at least 10% over the next five years.

Bargains Based on Earnings Prospects: This lists stocks with low price-earnings ratios relative to their projected five-year earnings growth rates.

Value Line Investment Survey

Value Line Publishing Inc., 220 E. 42nd St., New York, N.Y. 10017-5891, 800/634-3583,
www.valueline.com.

Part 1 Summary & Index:

The tables in the back (see index for the page numbers) include these useful lists:

Widest Discounts from Book Value: This consists of stocks whose ratios of recent price to book value are the lowest.

Lowest P/Es: This consists of stocks whose current price-earnings ratios based on estimated earnings are the lowest.

Bargain Basement Stocks: These firms have low price-earnings ratios as well as price-to-net-working-capital (current assets less all liabilities) ratios that are in the bottom quartile of Value Line stocks.

Standard & Poor's Industry Surveys

This is a monthly review of over 50 industries. In the back of the industry reports are one-line listings for the selected companies within each industry, allowing for comparison of the various firms listed relative to others in the same industry. For each stock, the S&P's earnings and dividend rank, and S&P's evaluation of its investment potential (using their Stock Appreciation Ranking System) is included, which allows easy selection and comparison.

THE INITIAL LIST

Suggested sources from which you can draw your initial list of potential undervalued stocks may be available in your local library. For computer users, an initial list of candidates can be compiled by applying various screens to a database of stocks. Appendix E discusses screens that are useful for the low price-earnings ratio approach.

The initial lists suggested here for beginners include not only lists of stocks with low price-earnings ratios, but also lists of stocks with other indications of undervaluation, such as low price to book value. Certain industries will dominate any list of stocks ranked only by price-earnings ratio. In addition, focusing only on stocks with the lowest ratios may turn up a list of stocks with no growth potential. Using other qualifying screens and indications of undervaluation will expand your universe of potential value plays and will help ensure that you do not accidentally concentrate too much on one specific industry.

Cyclical firms are likely to appear on many lists, so it would be useful to examine earnings growth over time periods covering at least one economic cycle to make sure you are focusing on long-term earnings trends. In addition, firms with years of negative earnings are likely to turn up. Negative earnings per share produce meaningless price-earnings ratios, and it can be difficult to form a judgment concerning a stock's average price-earnings ratio if there are several years with meaningless numbers. Examining a firm's price-earnings ratio over a much longer time period—perhaps even 10 years—may help. The trade-off, however, is that the company may have changed fundamentally over this time.

Lastly, keep in mind that this is a contrarian strategy. The written analyses about the firms or industries that appear in these lists may not be particularly enthusiastic and many may be quite negative. It is important to understand why most analysts hold the views they do, and most often they are correct. It may take some digging combined with independent judgment on your part to find potentially undervalued firms.

Once a potential stock is spotted, the next step is an in-depth evaluation to determine the fair market value.

AUTO CORP.: AN EXAMPLE

Auto Corp. offers a good example of the low price-earnings ratio approach to valuation, and at the time of this analysis was among stocks with the lowest price-earnings ratios.

Auto Corp. is a major automobile and truck manufacturer in the U.S. It is in a cyclical industry that was hurt badly by recession but then staged a strong turnaround. The firm currently has strong sales, and in fact is at peak capacity for most of its vehicles.

Entering the per share data from an information source is relatively straightforward, but it is important to stick to the same source for company information, since reporting services make different adjustments to the data they provide. Value Line is used for the data here and the earnings figures include non-recurring gains and losses.

A TOUR THROUGH THE WORKSHEET: PER SHARE INFORMATION

The first item of note is the price—as of mid-Year 6, it was between its Year 5 high and low, and during Year 5 the stock was at its five-year high.

The year-by-year earnings per share figures indicate how badly the firm fared during the recession. Clearly earnings were increasing by Year 6, but the five-year growth rate figure of 49% is unsustainable over the long term; earnings have increased, but are unlikely to continue at the same pace. Value Line projects earnings in Year 6 to be up substantially, at \$8.00 per share, an 18% increase over Year 5.

Dividends were halved in Year 3, but were increased slightly in Year 5 and again in Year 6. With the recovery in earnings, it was unlikely that dividends would drop further; using the five-year average dividend growth rate figure of -14% to project next year's dividends is misleading. The Year 6 annual indicated dividend was \$1.00.

LOOKING AT THE FINANCIAL RATIOS

Earnings concerns appear to be driving the price of Auto Corp. stock.

The price-earnings ratio of Auto Corp. appears at a considerable low, relative to its five-year historical norms. However, most of these price-earnings levels were produced at a time of extremely poor earnings for Auto Corp. In Year 2, for instance, Auto Corp. had earnings per share of only \$0.30. The extraordinarily high price-earnings multiple in Year 2 of 68.0 is due in large part to this extraordinarily low earnings per share level and not due to high expectations for growth. Its mid-Year 6 price-earnings ratio of 6.2, however, was slightly below its average for Year 5.

Auto Corp.'s average dividend yield paints a somewhat different picture. It had dropped substantially from its Year 2 high of 9.5%. High dividend yields can indicate a good value (high dividends at a low price), or they may indicate that the market feels the dividend is in jeopardy—a feeling that was justified by the dividend cut in Year 3. Dividend yields are most useful as indicators of value when dividends have held steady, and in Auto Corp.'s case they had not. The “current” dividend yield of 2.1% was still below the level reached after the dividend cut, but above its Year 5 high.

The payout ratio (dividends per share divided by earnings per share) helps gauge the strength of the dividend: The lower the payout ratio the better, implying that the dividend payment is more secure. A 100% payout ratio shows that a firm is paying out all of its earnings to its shareholders. The payout ratio for Auto Corp. ranged all over the board, but indicated that the dividend was not in jeopardy.

The Year 5 return on equity for Auto Corp. was above the industry average. Again, however, the historical figures are difficult to interpret. The return on equity measures how well the firm is being run on both an operational and financial basis. To boost return on equity, a company must increase the profit margin on goods being sold, make better use of its assets, or increase the level of financial leverage. Auto Corp.'s use of financial leverage, however, had been decreasing—and was below the industry norm. When times were good, Auto Corp. was reducing its debt.

Valuation Worksheet

Company: Auto Corp. Current Price \$ 47.50 Date (6/30/Year 6)

Ticker _____ Exchange _____ Current P/E 6.2 Current Yield 2.1%

Financial Statement & Ratio Analysis

Per Share Information	Company						Industry or Competitor	Market	
	Year 1	Year 2	Year 3	Year 4	Year 5	5-Year Avg	Year 5	5-Year Avg	Year 5
	Price: High	29.60	20.40	15.90	33.90	58.40			
Price: Low	18.10	9.10	9.80	11.50	31.80				
Earnings per Share (EPS)	1.36	0.30	-2.74	1.38	6.77	growth rate: 49%			
Dividends per Share (DPS)	1.20	1.20	0.60	0.60	0.65	growth rate: -14%			
Book Value per Share (BV)	32.42	30.53	20.91	25.47	19.32				
Financial Ratios									
Price-Earnings Ratio (P/E): Avg	17.5	49.2	NMF	16.4	6.7	22.5*	11.5	NMF	21.3
High (High Price ÷ EPS)	21.8	68.0	NMF	24.6	8.6	30.7*			
Low (Low Price ÷ EPS)	13.3	30.3	NMF	8.3	4.7	14.2*			
Dividend Yield % (DY): Avg	5.3	9.5	4.9	3.5	1.5	4.9	2.2	4.5	2.7
High (DPS ÷ Low Price)	6.6	13.2	6.1	5.2	2.0	6.6			
Low (DPS ÷ High Price)	4.1	5.9	3.8	1.8	1.1	3.3			
Payout Ratio % (DPS ÷ EPS)	88.2	400	-21.9	43.5	9.6	135.2*	33.0	NMF	
Return on Equity % (EPS ÷ BV)	4.2	1.0	NMF	5.4	35.0	11.4*	25.4	NMF	
Financial Leverage %	235	186	245	178	100	189	327	259	

*An average of 4 years, which excludes Year 3.
Year 1 data is oldest; Year 5 is the most recent.

NMF: no meaningful figure

Valuation Estimates

Model based on earnings:

Average high P/E × estimated Year 6 EPS: $\frac{30.7}{1} \times \$8.00 = \245.60 (high valuation estimate)

Average low P/E × estimated Year 6 EPS: $\frac{14.2}{1} \times \$8.00 = \113.60 (low valuation estimate)

Model based on dividends:

Estimated Year 6 annual DPS ÷ average low DY: $\frac{\$1.00}{0.033} = \30.30 (high valuation estimate)

Estimated Year 6 annual DPS ÷ average high DY: $\frac{\$1.00}{0.066} = \15.15 (low valuation estimate)

Use decimal form for DY. For instance 5.4% would be 0.054.

VALUING THE COMPANY

The bottom of the Valuation Worksheet provides valuations using both the earnings-based model and dividend-based models.

The first item that needs to be determined is the appropriate per share earnings figure for Year 6. The worksheet uses the more conservative Value Line estimate of \$8.00 rather than a figure based on historical growth, since the five-year earnings growth rate is misleading.

Another problem is the average price-earnings ratio figure. The figure used on the worksheet uses four years (Year 3 is excluded because the negative earnings per share figure for that year produces meaningless figures). This produces a high valuation estimate of \$245.60 and a low valuation estimate of \$113.60. The price-earnings ratio in Year 2 of 49.2, however, was extraordinarily high, due to the extremely low earnings per share figure that year. Excluding this year from the estimates, and using price-earnings ratios from only three years, would produce a high valuation of \$146.40 and a low valuation of \$70.40.

An even better approach, however, would be to examine the price-earnings ratio over a much longer time period—for instance, 10 years. This time period covers a complete economic cycle, and would provide a more appropriate price-earnings range. Using these figures (but still excluding Year 2) provides a high valuation of \$79.76 and a low valuation of \$40.47.

Auto Corp.'s mid-Year 6 price of \$47.50 was in the low range even using the 10-year averages, but it was not the obvious buy that it appeared at first blush using the five-year figures.

The Year 6 indicated dividend of \$1.00 per share is used in the dividend valuation model. The dividend model produces a high valuation of \$30.30 and a low valuation of \$15.15, based on the five-year high and low dividend yield averages. Ten-year dividend yield averages would produce a high valuation of \$33.89 and a low valuation of \$18.16. Auto Corp. clearly appeared overvalued based on the dividend yield model.

Which model is more appropriate? The stock at that time was priced considerably above the valuations based on the dividend yield model. It is far more likely that earnings expectations, rather than dividend considerations, are supporting the price of the stock.

The earnings models produced a wide range of valuations. Which one is most useful? Valuations based on earnings can be problematic for cyclical stocks, particularly if they are at their high points. The valuations based on the 10-year historical ratios are probably the most appropriate but still pose difficulties for a cyclical company. A more conservative approach would be to use the 10-year average *low* price-earnings ratio as the norm, and to purchase the stock only if it falls below the valuation based on that ratio. Using an average of its earnings per share over the last five years instead of Year 6 estimated earnings per share would also be more conservative. Using either of these as a guide, Auto Corp. would appear to be overvalued, or at least fairly valued.



CONCLUSION

While the worksheet examines quantitative factors, it is clear that many subjective factors go into the equation. Any final decision should be based on a better understanding of the company, its management, and its competitive environment.



Appendix E

Using Low P/E Screens to Find Undervalued Stocks

The price-earnings ratio is one of the most basic measures of value for investors. The price-earnings ratio, or multiple, is computed by dividing a stock's price by its most recent 12 months' earnings per share. The price-earnings ratio is followed so closely because it embodies the market's expectations of future company performance through the price component of the ratio and relates it to historical company performance as measured by earnings per share. This appendix will explore some of the basic price-earnings ratio techniques employed in screening a database for undervalued stocks.

Many studies point to the profitability of investing in out-of-favor stocks. Value investors seek out firms with low price-earnings ratios with the belief that the market may have overreacted to negative news and is not correctly discounting their future earnings potential. A simple search for low price-earnings ratios, however, can be misleading as a guide to undervalued stocks. Typically, firms with high growth potential trade with correspondingly high price-earnings ratios while those with low price-earnings ratios are expected to have low growth. Screening just for stocks with a low price-earnings ratio may leave you with a list of companies with little or no growth prospects.

The results of the screening on the following pages illustrate the problems associated in screening for low price-earnings stocks. AAI's *Stock Investor Pro* database of approximately 8,000 stocks was used to perform the screening. The first screening filter excluded financial firms because their non-standard financial statements do not allow for direct comparison with firms in other industries. The next set of filters required that the firms have five years of data and that earnings per share be positive for the last 12 months. Table 1 presents the 20 securities with the lowest price-earnings ratio that passed the screens. The price-earnings ratios for these securities ranged from 0.2 to 5.5 compared to the S&P 500's price-earnings ratio at that time of 21.3.

Any screen requires detailed analysis to be performed on the resulting list of companies, and for good reason. This list is loaded with troubled firms. Studies indicating the advantages of investing in low price-earnings stocks use large portfolios of stocks to reduce the higher risk of investing in any single stock. Friedman's, for example, at the time of the screen was burdened by the uncertainty of an SEC investigation examining fraud allegations by a financing company. Dynacq was facing the prospect of Nasdaq delisting.

In looking at Table 1 you may notice that only a few of the securities have informa-

tion entered for the average and relative price-earnings valuation models. A weakness of using the price-earnings ratio for analysis is that dividing price by a negative earnings per share figure produces a meaningless number.

USING HISTORICAL AVERAGES

One useful way to use price-earnings ratios is to compare current multiples against historical averages. A current price-earnings ratio lower than its historical average would be a potential sign that a stock is undervalued, while a current price-earnings ratio that is high compared to its historical average might indicate an overvalued firm. Models that examine historical averages assume that the growth prospects of the firm have not changed fundamentally over time and, based on historical relationships of price to earnings, the market is not correctly discounting the future earnings potential of the firm.

To help illustrate the valuation aspect of the average price-earnings model, it is common to multiply the five-year average price-earnings ratio by the most recent 12 months' earnings per share to arrive at a price estimate. Comparing this valuation price to the stock's current price provides a useful ratio for screening stocks. Table 2 provides the results of a stock screen based upon the average price-earnings ratio. The information pertaining to the average price-earnings model is highlighted.

Because the screen relies on the five-year average price-earnings ratio, this screening required that the firms have five years of positive earnings per share. This is why so many of the firms listed in Table 1 did not make it into Table 2. Beyond negative earnings, which lead to meaningless price-earnings ratios, unusually low earnings may also throw off standard price-earnings ratio screens. Short-term drops in earnings due to events such as special charges, extraordinary events, or in some cases even recessions may lead to unusually high price-earnings ratios. As long as the market interprets the earnings decrease as temporary, the high price-earnings ratio will be supported. Because the average price-earnings model relies on a normal situation, these "outlier" price-earnings ratios must be excluded. When performing a hands-on evaluation you can manually exclude years with negative earnings or unusually high price-earnings ratios. However, when screening a large universe of stocks, it is best to establish criteria that eliminate companies with extreme price-earnings ratios. For the average price-earnings screen, companies with ratios above 100 for any of the last five fiscal years were excluded. If you want to be more conservative, a tighter requirement, such as ratios above 40 or 50, might be specified.

The top 20 firms ranked on the ratio of average price-earnings valuation to current price are shown in Table 2. To arrive at the valuation, the earnings per share for the last 12 months was multiplied by average price-earnings ratio.

Table 4 illustrates the calculations involved in the average price-earnings model for Sears, Roebuck & Co. Five years prior, the price-earnings ratio of Sears had trended up as the price largely stayed flat and earnings had decreased. The average price-earnings ratio over those five years was 9.9. Multiplying the earnings per share for the last 12 months by the average price-earnings ratio leads to a valuation of \$128.70. This is 2.74

Definitions of Screens and Terms

EPS Last 12 Mo.: Earnings from continuing operations for the most recent 12 months divided by the number of common shares outstanding.

P/E Ratio: Market price per share divided by most recent 12 months' earnings per share. A measure of the market's expectations regarding the firm's earnings growth and risk.

5-Year Average P/E Ratio: An average of the high and low price-earnings ratios for the past five years. Provides a base level to compare the current price-earnings ratio.

Average P/E Share Valuation: Five-year average price-earnings ratio multiplied by earnings per share for the most recent 12 months. Gives an estimate of price supported by historical price-earnings average. Can also be computed with expected future earnings per share.

Ratio of Avg. P/E Valuation to Current Price: Estimated average price-earnings share valuation divided by current price. A ratio of 1.00 indicates that the valuation estimate is equal

to the current price. A ratio above 1.00 indicates an undervalued security while a ratio below 1.00 indicates an overvalued security.

5-Year P/E Relative: Ratio of historical company price-earnings levels relative to those of the overall stock market. Provides an indication as to whether the company traditionally trades at a premium or discount to the market.

P/E Relative Share Valuation: Price-earnings relative multiplied by the company earnings per share. Gives an estimate of stock price value supported by the historical relationship of the price-earnings ratio to the market's, and the current market and company situation. Can also be computed with expected company earnings per share.

Ratio of P/E Rel. Valuation to Current Price: Estimated price-earnings relative share valuation divided by current price. A ratio of 1.00 indicates that the valuation estimate is equal to the current price. A ratio above 1.00 indicates an undervalued security; a ratio below 1.00 indicates an overvalued security.

times the current price. Sears made the listing in Tables 1, 2 and 3.

One weakness with average price-earnings approach is that it looks purely at historical relationships, while the current market price is driven by future expectations. The trailing 12-month earnings per share figure may be unusually high or low due to a one-time event, or the historical average may not reflect a change in the company, industry, or economic environment. For Sears, the earnings per share figure of \$11.87 from the latest fiscal year represents a tremendous increase over the \$4.29 for the prior fiscal year. Much of this earnings increase can be attributed to the selling of its credit and financial products.

To get around the limitation of historical earnings per share, estimated earnings can be used. Consensus earnings estimates, however, are usually only available for larger, more actively followed companies. A screen requiring consensus earnings estimates will exclude a number of interesting neglected stocks.

Table I.
Low Price-Earnings Ratio Screen
Ranked by Price-Earnings Ratio

Company (Exchange)	Current Price (\$)	EPS Last 12 Mos (\$)	P/E Ratio (x)	5-Yr Avg P/E Ratio (x)	Avg P/E Share Val'n (\$)	Ratio of Avg P/E to Price (x)	5-Yr P/E Rel (x)	P/E Rel Share Val'n (\$)	Ratio of P/E Rel (x)	Industry
Gilat Satellite Networks (Nq)	7.39	32.46	0.2	nmf	nmf	nmf	nmf	nmf	nmf	Communications Equip
Media Services Group (Nq)	2.81	10.58	0.3	nmf	nmf	nmf	nmf	nmf	nmf	Business Services
EasyLink Services (Nq)	1.61	1.52	1.1	nmf	nmf	nmf	nmf	nmf	nmf	Computer Services
UnitedGlobalCom (Nq)	9.49	8.14	1.2	nmf	nmf	nmf	nmf	nmf	nmf	Broadcasting & Cable TV
Peace Arch Entertain. (A)	0.87	0.43	2.0	nmf	nmf	nmf	nmf	nmf	nmf	Motion Pictures
Marisa Christina (Nq)	1.95	0.91	2.1	nmf	nmf	nmf	nmf	nmf	nmf	Apparel/Accessories
Sand Technology (Nq)	1.18	0.43	2.7	nmf	nmf	nmf	nmf	nmf	nmf	Computer Peripherals
Dynegy Inc. (NY)	4.09	1.15	3.6	nmf	nmf	nmf	nmf	nmf	nmf	Oil & Gas Operations
Sears, Roebuck & Co. (NY)	47.01	13.00	3.6	9.9	128.70	2.74	0.60	160.68	3.42	Retail (Depart & Discount)
Sea Containers Ltd. (NY)	19.50	5.30	3.7	17.1	90.63	4.65	1.00	109.08	5.59	Water Transportation
World Airways, Inc. (Nq)	4.05	1.07	3.8	nmf	nmf	nmf	nmf	nmf	nmf	Air Courier
Atlantic Coast Airlines (Nq)	7.24	1.82	4.0	22.7	41.31	5.71	1.31	49.19	6.79	Airline
Northwest Airlines (Nq)	10.84	2.50	4.3	nmf	nmf	nmf	nmf	nmf	nmf	Airline
Talk America Holdings (Nq)	11.70	2.68	4.4	nmf	nmf	nmf	nmf	nmf	nmf	Communications Servs
Dynacq Healthcare (Nq)	5.92	1.23	4.8	83.1	102.21	17.27	4.24	107.32	18.13	Healthcare Facilities
Canada Southern Petro. (Nq)	4.92	0.98	5.0	nmf	nmf	nmf	nmf	nmf	nmf	Oil & Gas Operations
Friedman's (NY)	7.26	1.43	5.1	9.1	13.01	1.79	0.52	15.37	2.12	Retail (Spec Non-Apparel)
CPI Aerostructures(A)	9.70	1.86	5.2	nmf	nmf	nmf	nmf	nmf	nmf	Aerospace and Defense
USG Corporation (NY)	17.32	3.21	5.4	nmf	nmf	nmf	nmf	nmf	nmf	Construction-Raw Mat'ls
Capital Title Group (Nq)	4.25	0.77	5.5	nmf	nmf	nmf	nmf	nmf	nmf	Real Estate Operations

nmf = no meaningful figure

Exchanges: NY = New York Stock Exchange; A = American Stock Exchange;
 Nq = Nasdaq National Market

Source: Stock Investor Pro/Market Guide, I/B/E/S, and S&P Stock Guide. All data as of February 29, 2004.

Table 2.
Price-Earnings Average Screen Ranked by
the Valuation Ratio Based on Average P/E to Current Price

Company (Exchange)	Current Price (\$)	EPS Last 12 Mos (\$)	P/E Ratio (x)	5-Yr Avg P/E Ratio (x)	Avg P/E Share Val'n (\$)	Ratio of Avg P/E Val'n to Price (x)	5-Yr P/E Rel (x)	P/E Rel Share Val'n (\$)	Ratio of P/E Rel Val'n to Price (x)	Industry
Atlantic Coast Air. (Nq)	7.24	1.82	4.0	22.7	41.31	5.71	1.31	49.19	6.79	Airline
Sea Containers (NY)	19.50	5.30	3.7	17.1	90.63	4.65	1.00	109.08	5.59	Water Transportation
EXX Inc. (A)	3.50	0.53	6.6	28.5	15.11	4.32	1.52	16.63	4.75	Elec. Instruments & Controls
HealthTronics Surgical (Nq)	6.47	0.54	12.0	46.4	25.06	3.87	2.69	29.93	4.63	Medical Equip & Supplies
Pre-Paid Legal Services (NY)	23.73	2.27	10.5	36.1	81.95	3.45	2.15	100.70	4.24	Personal Services
Ecology & Environ (A)	10.04	0.88	11.4	32.0	28.16	2.80	1.96	35.49	3.53	Waste Management Servs
Sears, Roebuck & Co. (NY)	47.01	13.00	3.6	9.9	128.70	2.74	0.60	160.68	3.42	Retail (Depart & Discount)
Geo Group (NY)	21.54	3.67	5.9	16.1	59.09	2.74	0.93	70.28	3.26	Business Services
CGI Group (NY)	6.49	0.35	18.5	50.5	17.68	2.72	2.82	20.32	3.13	Computer Services
ConocoPhillips (NY)	68.87	6.71	10.3	26.1	175.13	2.54	1.59	219.48	3.19	Oil & Gas - Integrated
Ortho. Centers of Amer. (NY)	7.49	0.98	7.6	19.2	18.82	2.51	1.12	22.69	3.03	Healthcare Facilities
FTI Consulting, Inc. (NY)	16.42	1.55	10.6	26.6	41.23	2.51	1.54	49.25	3.00	Business Services
Air T, Inc. (Nq)	5.03	0.68	7.4	18.1	12.31	2.45	1.03	14.45	2.87	Air Courier
Sensient Tech. (NY)	19.75	1.73	11.4	27.6	47.75	2.42	1.71	60.79	3.08	Chemical Manufacturing
Internat'l Multifoods (NY)	19.48	1.14	17.1	38.4	43.78	2.25	2.29	53.82	2.76	Food Processing
DST Systems, Inc. (NY)	44.76	2.86	15.7	35.1	100.39	2.24	2.12	124.71	2.79	Computer Services
Mattel, Inc. (NY)	19.00	1.22	15.6	34.6	42.21	2.22	2.07	51.97	2.74	Recreational Products
Methode Electronics (Nq)	12.50	0.60	20.8	46.0	27.60	2.21	2.65	32.70	2.62	Elec Instruments & Controls
Starcraft Corp. (Nq)	14.39	2.03	7.1	15.6	31.67	2.20	0.84	35.27	2.45	Auto & Truck Manufac
CenturyTel, Inc. (NY)	28.57	2.39	12.0	26.3	62.86	2.20	1.66	81.56	2.85	Communications Servs

Exchanges: NY = New York Stock Exchange; A = American Stock Exchange;
 Nq = Nasdaq National Market

Source: Stock Investor Pro/Market Guide, I/B/E/S, and S&P Stock Guide. All data as of February 29, 2004.

Table 3.
Price-Earnings Relative Screen Ranked by
the Valuation Ratio Based on P/E Relative to Current Price

Company (Exchange)	Current Price (\$)	EPS Last 12 Mos (\$)	P/E Ratio (x)	5-Yr Avg P/E Ratio (x)	Avg P/E Share Val'n (\$)	Ratio of Avg P/E Val'n to Price (x)	5-Yr P/E Rel (x)	P/E Rel Share Val'n (\$)	Ratio of P/E Rel Val'n to Price (x)	Industry
Sears, Roebuck & Co. (NY)	47.01	13.00	3.6	9.9	128.70	2.74	0.60	160.68	3.42	Retail (Depart & Discount)
Geo Group, Inc. (NY)	21.54	3.67	5.9	16.1	59.09	2.74	0.93	70.28	3.26	Business Services
Ortho. Centers of Amer. (NY)	7.49	0.98	7.6	19.2	18.82	2.51	1.12	22.69	3.03	Healthcare Facilities
Air T, Inc. (Nq)	5.03	0.68	7.4	18.1	12.31	2.45	1.03	14.45	2.87	Air Courier
Utah Medical Prods. (Nq)	24.70	4.23	5.8	12.7	53.72	2.17	0.78	67.96	2.75	Medical Equip & Supplies
Alleghany Corp. (NY)	235.09	21.71	10.8	20.1	436.37	1.86	1.29	576.24	2.45	Misc Fabricated Prods
Starcraft Corp. (Nq)	14.39	2.03	7.1	15.6	31.67	2.20	0.84	35.27	2.45	Auto & Truck Manufac
Cousins Properties (NY)	30.70	2.80	11.0	20.1	56.28	1.83	1.27	73.22	2.39	Real Estate Operations
Embrex, Inc. (Nq)	11.00	1.09	10.1	19.7	21.47	1.95	1.17	26.19	2.38	Biotechnology & Drugs
Pogo Producing (NY)	45.37	4.60	9.9	17.2	79.12	1.74	1.03	97.69	2.15	Oil & Gas Operations
Friedman's Inc. (NY)	7.26	1.43	5.1	9.1	13.01	1.79	0.52	15.37	2.12	Retail (Spec Non-Apparel)
Knightsbridge Tankers (Nq)	17.81	2.05	8.7	14.5	29.73	1.67	0.86	36.49	2.05	Water Transportation
BellSouth Corp. (NY)	27.56	1.94	14.2	22.2	43.07	1.56	1.40	56.00	2.03	Comm Services
Fresh Brands, Inc. (Nq)	9.25	1.39	6.7	10.7	14.87	1.61	0.66	18.78	2.03	Retail (Grocery)
Nordic American Tanker (A)	19.26	2.90	6.6	10.6	30.74	1.60	0.65	38.77	2.01	Water Transportation
Catellus Develop (NY)	26.25	2.22	11.8	17.4	38.63	1.47	1.10	50.28	1.92	Real Estate Operations
Adolph Coors (NY)	67.78	4.77	14.2	21.4	102.08	1.51	1.32	129.69	1.91	Beverages (Alcoholic)
Marathon Oil (NY)	35.14	3.26	10.8	16.1	52.49	1.49	1.00	67.16	1.91	Oil & Gas Operations
SBC Comm. (NY)	24.01	1.81	13.3	19.5	35.30	1.47	1.21	45.26	1.89	Communications Servs
SPX Corp. (NY)	42.00	3.44	12.2	18.5	63.64	1.52	1.11	78.61	1.87	Misc Capital Goods

Exchanges: NY = New York Stock Exchange; A = American Stock Exchange;
Nq = Nasdaq National Market

Source: Stock Investor Pro/Market Guide, I/B/E/S; and S&P Stock Guide. All data as of February 29, 2004.

Table 4.
Sample Calculations Using
Sears, Roebuck & Co. as an Example

	Market		Sears, Roebuck & Co.						
	P/E Ratio		Stock Price		EPS (\$)	P/E Ratio		P/E Relative to Market	
	High (x)	Low (x)	High (\$)	Low (\$)		High (x)	Low (x)	High (x)	Low (x)
Year 5	22.7	12.5	56.05	18.25	11.87	4.7	1.5	0.21	0.12
Year 4	21.2	12.0	59.90	19.71	4.29	14.0	4.6	0.66	0.38
Year 3	20.7	11.1	48.93	29.90	2.24	21.8	13.3	1.05	1.20
Year 2	21.2	9.9	43.50	25.25	3.88	11.2	6.5	0.53	0.66
Year 1	22.5	12.0	53.19	26.69	3.81	14.0	7.0	0.62	0.58
5-Year Average	21.7	11.5				13.1	6.6	0.61	0.59
5-Year Average (combined high & low)		16.6					9.9		0.60

Year 1 data is oldest; Year 5 is the most recent.

As of February 29, 2004

Market Price-Earnings Ratio	20.6
Stock Price	\$47.01
Earnings per share (last 12 mos.)	\$13.00*
<i>* Includes \$4.14B gain on sale of credit and financial products</i>	
Price-Earnings Ratio	3.6

Average P/E Model

Share Valuation
 = Average P/E Ratio × EPS
 = 9.9 × 13.00
 = \$128.70

Ratio of Share Valuation to Current Price
 = Valuation ÷ Current Price
 = \$128.70 ÷ \$47.01
 = 2.74

P/E Relative Model

Adjusted P/E
 = Current Market P/E × Average P/E Relative
 = 20.6 × 0.60
 = 12.36

Share Valuation
 = Adjusted P/E × EPS
 = 12.36 × 13.00
 = \$160.68

Ratio of Share Valuation to Current Price
 = Valuation ÷ Current Price
 = \$160.68 ÷ \$47.01
 = 3.42

PRICE-EARNINGS RELATIVE MODELS

Another way to use price-earnings ratios is to compare them with the industry price-earnings ratio, or even the overall market ratio. Based upon economic conditions and factors, the fair value of the market can change. For example, the market can support higher price-earnings ratios under the condition of low interest rates than it can under high interest rate conditions. The price-earnings relative is determined by dividing a company's price-earnings ratio by that of the market. Based on relative growth and risk expectations, companies trade at market multiples greater or smaller than that of the market. One would expect a company with prospects better than the market or with lower risk to have a higher price-earnings ratio than the market. Comparing a firm to its industry is an equally useful technique that has the benefit of isolating interesting candidates within a specific industry.

A price-earnings relative above 1.00 would indicate that a company's price-earnings ratio is typically above the market's price-earnings ratio, while a price-earnings relative below 1.00 would indicate that a company's price-earnings ratios tends to be lower than the market's. By averaging the price-earnings relative over time, you can estimate a price-earnings relative that a stock tends to follow.

Table 4 illustrates the calculations involved in the price-earnings relative model. Over the five years prior to the screen, Sears averaged a price-earnings multiple below that of the overall stock market leading to an average price-earnings relative of 0.60. Multiplying the price-earnings relative by the market's current price-earnings ratio provides an adjusted stock price-earnings ratio. The assumption is that the market is fairly valued and that the company's relationship to the market has not changed. A stock price valuation can be determined by multiplying this adjusted stock price-earnings ratio by the earnings per share figure. The ratio of the valuation to the current price provides a useful screening measure. Table 3 is based on this valuation ratio determined by dividing the price-earnings relative valuation by the current price.

To eliminate outliers, the high limit for the price-earnings ratio was tied to the market's price-earnings level. Companies whose price-earnings ratios were more than double the market's in any year were excluded. This filter was more stringent than the one used with the average price-earnings ratio screen, creating a more conservative screen and leading to a largely different list of companies in Table 3 than in Table 2.

The companies passing these screens were sorted based on their ratio of price-earnings relative share valuation to current price, with the top 20 firms listed in Table 3. The fields pertaining to the price-earnings relative model are highlighted.

CONCLUSION

Screening for stocks by looking at price-earnings ratios can help highlight firms that have fallen out of favor. As in any technique, there are many ways to take a simple rule and expand upon it to meet your objectives. Looking at just low price-earnings stocks will highlight companies the market is neglecting, but this screen also tends to highlight the most troubled issues that require very detailed analysis. It is also common for low price-



earnings screens to be dominated by a few industries that are currently out of favor.

Screening based upon an examination of the average price-earnings ratio allows you to seek out companies that have fallen out of favor, but may not be as troubled as firms from the pure low price-earnings screen. The average price-earnings model looks to past earnings valuation to help set a benchmark comparison. It identifies firms that have deviated from their normal valuation level, with the expectation that they will move back toward their typical levels. This model also has its weaknesses: It assumes that nothing fundamental to the company, industry, or market has significantly changed.

The primary benefit of the price-earnings relative model over the average price-earnings ratio is that it allows for adjustments to broad economic changes affecting the market. It identifies those stocks that have deviated from their long-term relationships to a benchmark index, while still assuming a stable company relationship to the market over time. As with all of the techniques presented, industries that have fallen out of favor may dominate the analysis.

This chapter has focused purely on identifying primary screening criteria. Screening for low price-earnings firms turns up companies that have fallen out of favor, some for good reasons. In constructing screening criteria, you may wish to include a number of conditioning criteria that help indicate items such as the future earnings potential of the firm, the financial strength of the firm, as well as the strength of the firm within its industry. Investing in low price-earnings stocks can be rewarding, but caution is required.



Using Analysts' Estimates to Your Advantage

When purchasing a stock, an investor must first form an expectation concerning the outlook for the company and the stock's price. But stock prices are driven by market expectations—the overall expectations of all investors—and stock prices change as the market's expectations change.

Tracking those expectations can provide some clues to the future direction of a stock's price. This can be done by examining the earnings estimates made by analysts at major investment research firms who follow the stock.

This chapter focuses on a basic approach that takes advantage of changes in expectations to turn up promising candidates. Appendix F discusses in detail the ways in which earnings estimates can be tracked using computer-based services, and how they can be used to screen a large database of stocks.

STOCK CHARACTERISTICS

Research on earnings estimates indicates that investing in stocks of companies with significant upward revisions in analysts' earnings estimates and positive earnings surprises leads to above-average returns. An earnings surprise occurs when a company announces earnings that are significantly different from analysts' consensus expectations.

If any general company characteristic can be associated with stocks that have earnings surprises, it is that they are in a state of change and uncertainty. The environment of uncertainty may come out of an overall economic change, such as an economy on the verge of a turnaround. At this writing, for instance, screens for stocks with earnings surprises and positive revisions in analysts' earnings estimates are filled with cyclical companies that are experiencing stronger sales than expected. A change within an industry, such as the unanticipated impact of a new regulation or even a change within an individual company such as the use of new technology, may also cause uncertainty.

THE INITIAL LIST

Suggested sources from which you can draw your initial list are presented. Many may be available in your local library. For computer users, an initial list of candidates can be compiled from the databases listed at the bottom of the box.

Earnings estimates can be used in a variety of ways, which Appendix F explores more fully. For the purpose of spotting promising candidates, you would want to concentrate

Drawing Up an Initial List: Sources of Information

Analyst Watch

Zacks Investment Research Inc.
111 N. Canal St., Suite 1101, Chicago, Ill. 60606
800/767-3771

www.zacks.com

Monthly. Reports earnings estimates from analysts for over 6,000 stocks. Includes a section near the front called Criteria Screens, which has a large number of listings based on earnings estimates, including largest positive earnings revisions covering various periods and best earnings surprises.

Standard & Poor's Earnings Guide

Standard & Poor's Corp.
55 Water St., New York, N.Y. 10041
800/221-5277

www.standardandpoors.com

Monthly. Includes summary (one-line) information and focuses on earnings and earnings growth estimates from analysts. The front includes this useful list:

Significant Estimate Changes: These are firms that have had significant changes in earnings estimates from analysts since the previous month.

Two other lists appear periodically that may also be useful:

Substantial Estimate and Price Increases From Year-End: These are firms whose earnings estimates have increased since December of the previous year by at least 20% and whose stock prices have gone up by at least 20%.

Tight Earnings Projections: These are firms in which analysts' high and low estimates don't differ more than 10%. Given the tight range of estimates, any earnings "surprises" would have a large impact on these stocks.

Thomson I/B/E/S and First Call Monthly Summary Data Book

195 Broadway, New York, N.Y. 10007
800/782-5555

www.firstcall.com

Monthly. Reports earnings estimates from analysts

for over 4,000 stocks. The Highlights section provides a number of useful lists, including the 40 largest estimate increases over the previous month and companies with the largest positive quarterly earnings surprises.

Value Line Investment Survey

Value Line Publishing Inc., 220 E. 42nd St., New York, N.Y. 10017-5891
800/634-3583

www.valueline.com

Part 1 Summary & Index: Value Line provides its own earnings estimates for companies it covers. It does not have a separate list of companies with earnings revisions. However, the Summary has one-line listings for all companies, and indicates earnings revisions with an arrow next to the estimate. The tables in the back (see index for the page numbers) also includes this list:

Stocks Moving Up In Rank: This consists of stocks of firms who have moved up in Value Line's Timeliness ranks, primarily those caused by new earnings reports where earnings were higher than expected. (Found in the Noteworthy Rank Changes section.)

Database Sources

The sources listed above are all published sources for earnings estimates. The following list shows information services that provide earnings estimates for the computer user.

Stock Investor Pro
800/428-2244
www.aaii.com

Zacks
800/767-3771
www.zacks.com

Thomson FN
800/782-5555

on those firms that would benefit from changes in expectations. That would mean looking for these characteristics:

- Stocks of firms with significant positive revisions in the earnings expectations of analysts.
- Stocks of firms whose recent earnings reports significantly exceeded earnings expectations (a positive earnings surprise).
- Stocks of firms with a tight range of earnings estimates, where a positive earnings surprise would have the largest impact, or stocks of firms with a wide range of earnings estimates where a positive earnings surprise would be most likely.

Make sure that the list you are using is recent. Also keep in mind that the stocks selected under this approach are likely to receive a fair amount of coverage, making the likelihood of uncovering “hidden potential” unlikely. Only if you disagree with the consensus and feel earnings will once again come in higher than expected will there be the potential for above-average returns.

Once a potential stock is spotted, the next step is an in-depth evaluation to determine the fair market value.

MANUFACTURING INDUSTRIES: AN EXAMPLE

Manufacturing Industries offers a good example of this approach, appearing in several lists at this time where an upward earnings revision was indicated in the summary listings.

Manufacturing Industries is classified in the machinery (construction and mining) industry, a cyclical industry. However, it is actually a holding company with three subsidiaries: a forklift manufacturing group; a small appliance manufacturer; and a coal mining firm.

The industry as a whole, according to Value Line, had posted earnings above those that were expected due to better than expected sales both domestically and abroad. In line with this, Manufacturing Industries’ forklift manufacturing subsidiary had a large second-quarter sales increase. Lower manufacturing costs also helped another subsidiary in the second quarter. According to Value Line, the biggest concern facing investors is how soon this cyclical industry boom would peak and begin to drop off.

Value Line was used as the source of both company and industry information on the completed valuation worksheet.

PER SHARE INFORMATION

The first item of note is the current Year 6 price, which was near its high for Year 5. The price had stayed within a wide range since Year 2 and had not since risen above the top of this range.

At the same time, year-by-year earnings per share showed a fairly sharp drop over the years, from \$5.26 in Year 1 to only \$1.30 in Year 5, leading to a five-year growth rate of -29.5%. However, Manufacturing Industries is a cyclical firm, and earnings in mid-Year 6 were heading up, not down. For that reason, the five-year earnings growth rate

is not particularly useful in projecting the next year's earnings. The Value Line earnings estimate for Year 6 was \$4.35, an increase of 234% over Year 5 earnings.

Dividends remained fairly steady over the prior five years, with a five-year growth rate of only 3.3%. Value Line's estimate of \$0.68 shows a continuation of that modest increase.

LOOKING AT THE FINANCIAL RATIOS

The price-earnings ratio of Manufacturing Industries, at 21.8 in mid-Year 6, was close to its five-year average high, and below its lowest level in Year 5. However, the Year 5 price-earnings range of 32.3 to 44.8 was extremely high due in large part to the cyclically low earnings per share level and not due to high expectations for growth. The abnormally high Year 5 figures tend to distort the five-year average; a four-year average, excluding Year 5, produces an average price-earnings ratio of 13.5, with a four-year average high of 18.0 and a four-year average low of 9.0. The mid-Year 6 price-earnings ratio was above these four-year averages, in line with expectations at that time regarding earnings growth.

Manufacturing Industries' dividend yield of 1.2% in mid-Year 6 was close to its five-year low. Dividend yields (dividends per share divided by price) are most useful as indicators of value when dividends have been significant and steady, which they have been. Normally, a low dividend yield relative to the historical level indicates a relatively high market valuation for the firm, if dividend considerations are a driving force behind the stock price.

Manufacturing Industries' payout ratio in Year 5 almost doubled, due to its abnormally low earnings per share figure for that year. A firm's payout ratio (dividends per share divided by earnings per share) helps gauge the strength of the dividend by indicating how much of a firm's earnings are paid out to shareholders. The lower the payout ratio, the better, implying dividend payments are more secure. Excluding Year 5, Manufacturing Industries' payout ratio had been low, indicating that the dividend was not in jeopardy. Earnings per share were expected to increase much more than dividends, so Manufacturing Industries' payout ratio would likely drop back to pre-Year 5 levels.

The Year 5 return on equity of 4.9% was below the industry average of 14.8%, although the abnormally low Year 5 earnings per share figure distorts that year's return on equity figure. Return on equity measures how well the firm is managed both operationally and financially. To boost return on equity, a company must increase its profits from sales, manufacture its goods more efficiently, or increase the level of financial leverage. Manufacturing Industries' use of financial leverage had been steadily decreasing, but it was above the industry norm. One would expect to see a return on equity higher than the industry average with above-average financial leverage.

VALUING THE COMPANY

The bottom of the Valuation Worksheet provides valuations using both the earnings-based model and dividend-based models.

Valuation Worksheet

Company: Manufacturing Industries Current Price \$ 58.00 Date (8 / 12 / Year 6)

Ticker _____ Exchange _____ Current P/E 21.8 Current Yield 1.2%

Financial Statement & Ratio Analysis

Per Share Information	Company						Industry or Competitor	Market	
	Year 1	Year 2	Year 3	Year 4	Year 5	5-Year Avg	Year 5	5-Year Avg	Year 5
	Price: High	56.00	70.50	56.90	60.00	58.30			
Price: Low	31.30	22.00	29.00	34.30	42.00				
Earnings per Share (EPS)	5.26	4.87	2.31	2.71	1.30	growth rate: -29.5%			
Dividends per Share (DPS)	0.58	0.60	0.62	0.64	0.66	growth rate: 3.3%			
Book Value per Share (BV)	33.89	39.75	39.44	26.82	26.35				

Financial Ratios

Price-Earnings Ratio (P/E): Avg	8.3	9.5	18.6	17.4	38.6	18.4	16.6	**	21.3
High (High Price ÷ EPS)	10.6	14.5	24.6	22.1	44.8	23.0			
Low (Low Price ÷ EPS)	6.0	4.5	12.6	12.7	32.3	13.9			
Dividend Yield % (DY): Avg	1.4	1.8	1.6	1.5	1.4	1.5	1.8	**	2.7
High (DPS ÷ Low Price)	1.9	2.7	2.1	1.9	1.6	2.0			
Low (DPS ÷ High Price)	1.0	0.9	1.1	1.1	1.1	1.0			
Payout Ratio % (DPS ÷ EPS)	11.0	12.3	26.8	23.6	50.8	24.4	30	**	
Return on Equity % (EPS ÷ BV)	15.5	12.3	5.9	10.1	4.9	10.7	14.8	6.2	
Financial Leverage* %	240	234	213	192	152	206	80	68	

*Long-term debt ÷ equity

**Not enough years with meaningful stats

Year 1 data is oldest; Year 5 is the most recent.

Valuation Estimates

Model based on earnings:

Average high P/E × estimated Year 6 EPS: $\frac{23.0}{1} \times \frac{4.35}{1} = \100.05 (high) using 4-yr P/E: \$78.30 (high)


Average low P/E × estimated Year 6 EPS: $\frac{13.9}{1} \times \frac{4.35}{1} = \60.46 (low) using 4-yr P/E: \$39.15 (low)

Model based on dividends:

Estimated Year 6 annual DPS ÷ average low DY: $\frac{0.68}{1} \div \frac{0.01}{1} = \68.00 (high valuation estimate)

Estimated Year 6 annual DPS ÷ average high DY: $\frac{0.68}{1} \div \frac{0.02}{1} = \34.00 (low valuation estimate)

Use decimal form for DY. For instance 5.4% would be 0.054.



For the earnings-based models, the Year 6 earnings per share figure used is the Value Line projection, since a projection based on the five-year average growth rate would be misleading. For the dividend-based models, the dividends per share figure is based on the five-year average growth rate, which matches the Value Line projection.

The five-year averages for the high and low price-earnings ratios and high and low dividend yields were also used in the worksheet. The results: The earnings-based models produced a valuation range of \$60.46 to \$100.05, while the dividend-based models produced a range of \$34.00 to \$68.00.

The valuations produced by the earnings model would indicate that the stock, in mid-Year 6, was underpriced at a time when earnings expectations were clearly rising—an unlikely occurrence. That is reason to question the model's assumptions.

As we noted earlier, the five-year average price-earnings ratio figures are distorted by the abnormally high ratios in Year 5. A four-year average that excludes Year 5 would be more appropriate. Using the four-year average in the earnings-based model produces a valuation range of \$39.15 to \$78.30.

What about the dividend-based model? Since dividend considerations do not appear to be much of a factor affecting Manufacturing Industries' price, this model is not useful here.

Manufacturing Industries' price in mid-Year 6 was about \$58.00, close to the midpoint between the four-year high and four-year low earnings-based valuations. That indicates a fairly priced stock.

If you agree with the consensus outlook for earnings, as indicated by the Value Line estimates, don't expect to be rewarded by above-average returns. However, if you expect that earnings per share will come in higher than expected by the consensus, there will be a potential for another earnings surprise—and the potential for above-average returns.

CONCLUSION

A careful examination of the assumptions is a critical part of the valuation and will help you identify factors that could be misleading.

While the worksheet examines quantitative factors, it is clear that many subjective factors go into the equation. Any final decision should be based on a better understanding of the company, its management, and its competitive environment. This can only be accomplished by a thorough reading of the firm's financial reports, as well as the reports and summaries on the firm and its industry.



Appendix F

Analyzing Earnings Revisions

Investors quickly learn that the market is forward-looking. Security prices are established through expectations, and prices change as these expectations change or are proven incorrect. In the last 20 years, we have seen a significant increase in the services that track and analyze expected earnings per share estimates.

Services such as First Call, I/B/E/S, Reuter's, Zacks, and Standard and Poor's provide consensus earnings estimates by tracking the estimates of thousands of investment analysts. Tracking these expectations and their changes is an important and rewarding strategy for screening a database of stocks.

In using earnings estimates, the first rule to keep in mind is that the current price usually reflects the consensus earnings estimate. It is common to see price declines for stocks that report earnings increases from the previous reporting period because in many cases, while the actual earnings represent an increase, the increase is not as great as the market had expected. Earnings surprises occur when a company reports actual earnings that differ from consensus earnings estimates.

During the earnings reporting season, financial newspapers such as The Wall Street Journal provide daily reports on earnings announcements. Firms with significant earnings surprises are often highlighted.

Positive earnings surprises occur when actual reported earnings are significantly above the forecasted earnings per share. Negative earnings surprises occur when reported earnings per share are significantly below the earnings expectations. The stock prices of firms with significant positive earnings surprises show above average performance, while those with negative surprises have below average performance.

Changes in stock price resulting from an earnings surprise can be felt immediately, and the surprise also has a long-term effect. Studies indicate that the effect can persist for as long as a year after the announcement. This means that it does not make sense to buy a stock after the initial price decline on a negative earnings surprise. There is a good chance that the stock will continue to underperform the market for some time. It also indicates that it may not be too late to buy into an attractive company after a better than expected earnings report is released.

Not surprisingly, large firms tend to adjust to surprises more quickly than small firms. Larger firms are tracked by more analysts and portfolio managers, who tend to act quickly.

Firms with a significant quarterly earnings surprise also often have earnings surprises in subsequent quarters. When a firm has a surprise, it often is a sign that other similar surprises will follow. This is sometimes referred to as the cockroach effect—like cock-

Firms With Upward Revisions in Earnings Estimates

Company (Exchange)	I/B/E/S			No of Est	No of Revs Up in Mo	EPS		Price Change		Industry
	EPS Estimate					Estimate High (\$)	Estimate Low (\$)	Last Qtr (%)	Last Yr (%)	
	Month Ago (\$)	Current (\$)	Change (%)							
Large Cap (above \$5 billion)										
LM Ericsson (ADR) (Nq)	0.43	0.86	100.0	21	18	1.38	0.35	79	347	Communications Equip
Applied Materials, Inc. (Nq)	0.51	0.79	54.9	29	27	0.89	0.66	-12	64	Semiconductors
Broadcom Corp. (Nq)	0.94	1.11	18.1	23	20	1.25	0.90	11	179	Semiconductors
Starwood Hotels & Resorts (NY)	0.93	1.09	17.2	20	18	1.15	0.90	13	73	Hotels & Motels
Deere & Company (NY)	3.54	4.07	15.0	17	16	4.35	3.79	5	55	Construction & Agri Machinery
BHP Billiton Ltd. (ADR) (NY)	0.86	0.97	12.8	5	4	1.10	0.79	16	70	Metal Mining
Analog Devices, Inc. (NY)	1.33	1.45	9.0	27	24	1.70	1.36	0	71	Semiconductors
Nordstrom, Inc. (NY)	1.98	2.13	7.6	18	18	2.30	2.03	13	130	Retail (Apparel)
May Department Stores (NY)	2.10	2.26	7.6	17	15	2.45	2.00	19	80	Retail (Dept & Discount)
Aetna Inc. (NY)	6.02	6.41	6.5	19	19	6.75	6.25	25	92	Insurance (Accident & Health)
T. Rowe Price Group (Nq)	2.32	2.47	6.5	15	12	2.59	2.27	25	104	Investment Services
QUALCOMM, Inc. (Nq)	1.62	1.72	6.2	37	25	1.93	1.50	42	82	Communications Equip
Pulte Homes, Inc. (NY)	5.72	6.04	5.6	12	9	6.15	5.85	10	108	Construction Services
Adobe Systems Inc. (Nq)	1.29	1.36	5.4	21	18	1.49	1.26	-10	35	Software & Program
Network Appliance (Nq)	0.38	0.40	5.3	22	19	0.41	0.39	-6	104	Computer Networks
Washington Post (NY)	31.93	33.53	5.0	7	7	35.75	31.30	11	26	Printing & Publishing
Moody's Corp. (NY)	2.49	2.61	4.8	11	10	2.75	2.51	17	52	Business Services
RadioShack Corp. (NY)	1.89	1.98	4.8	20	19	2.03	1.88	11	76	Retail (Technology)
Progressive Corp. (NY)	5.30	5.54	4.5	23	12	6.35	4.80	6	59	Insurance (Prop & Cas)
Willis Group Holdings Ltd. (NY)	2.59	2.70	4.2	10	9	2.78	2.65	16	53	Insurance (Misc)

Mid Cap (\$1 billion to \$5 billion)

ON Semiconductor (Nq)	0.02	0.08	300.0	9	4	0.16	-0.03	29	501	Semiconductors
Varian Semiconductor (Nq)	0.88	1.55	76.1	13	12	1.89	1.20	-12	58	Semiconductors
MKS Instruments, Inc. (Nq)	0.91	1.24	36.3	9	9	1.80	1.05	-13	82	Semiconductors
Western Wireless (Nq)	0.54	0.72	33.3	9	6	1.02	0.10	29	295	Communications Servs
People's Bank (Nq)	1.17	1.50	28.2	5	4	1.68	1.07	39	75	S&Ls/Savings Banks
Petrobras Energia Partici (NY)	0.47	0.59	25.5	5	2	0.96	-0.11	39	83	Oil & Gas - Integrated
Avnet, Inc. (NY)	0.66	0.80	21.2	9	9	0.86	0.75	10	129	Electronic Instruments & Controls
Brocade Comm. Sys. (Nq)	0.11	0.13	18.2	30	25	0.16	0.11	14	73	Computer Storage Devices
Semtech Corp. (Nq)	0.66	0.77	16.7	17	16	0.80	0.74	-1	64	Semiconductors
Advanced Fibre Comm. (Nq)	0.43	0.50	16.3	10	5	0.57	0.33	10	54	Communications Equip
Ingram Micro Inc. (NY)	0.89	1.03	15.7	8	7	1.20	0.90	30	83	Computer Hardware

(continued on next page)

Firms With Upward Revisions in Earnings Estimates (continued)

Company (Exchange)	I/B/E/S EPS Estimate			No of Est	No of Revs up in Mo	EPS Estimate Range		Price Change		Industry
	Month	Current	Change			High	Low	Last Qtr	Last Yr	
	(\$)	(\$)	(%)			(\$)	(\$)	(%)	(%)	
Teekay Shipping Corp. (NY)	7.62	8.80	15.5	5	2	10.00	7.07	32	72	Water Transport
Southern Peru Copper (NY)	2.98	3.40	14.1	5	2	4.27	2.26	0	143	Metal Mining
Navistar International (NY)	2.51	2.84	13.1	10	9	3.30	2.50	8	97	Auto & Truck Manufacturers
PanAmSat Corp. (Nq)	0.78	0.87	11.5	6	3	1.00	0.77	3	65	Communications Servs
Philadelphia Consol. Hld. (Nq)	3.73	4.15	11.3	7	6	4.25	3.75	18	91	Insurance (Prop& Cas)
Perrigo Company (Nq)	0.75	0.83	10.7	5	5	0.84	0.83	29	66	Biotech & Drugs
RSA Security Inc. (Nq)	0.39	0.43	10.3	16	13	0.49	0.38	13	135	Software & Program
American Eagle Outfitters (Nq)	1.08	1.19	10.2	27	25	1.32	1.04	32	69	Retail (Apparel)
United Online, Inc. (Nq)	0.81	0.89	9.9	11	10	1.00	0.86	-5	81	Computer Services
Small Cap (below \$1 billion)										
E.piphany, Inc. (Nq)	-0.03	0.02	166.7	13	11	0.06	-0.02	-12	65	Software & Program
Arris Group, Inc. (Nq)	0.09	0.23	155.6	10	9	0.34	0.14	61	116	Communications Equip
Advanced Energy Ind. (Nq)	0.48	1.21	152.1	11	11	1.94	0.85	-18	112	Electronic Instruments & Controls
SonicWALL, Inc. (Nq)	0.05	0.11	120.0	18	12	0.15	0.08	20	188	Communications Equip
TeleTech Holdings (Nq)	0.01	0.02	100.0	5	1	0.04	0.01	-24	52	Computer Services
SI Corporation (Nq)	0.03	0.06	100.0	5	3	0.08	0.05	-18	40	Software & Program
Tele Celular Sul Particip (NY)	1.03	1.51	46.6	6	2	3.38	0.40	-12	106	Communications Servs
Komag, Incorporated (Nq)	1.32	1.78	34.8	5	4	1.95	1.65	39	263	Computer Storage Devices
Micromuse, Inc. (Nq)	0.16	0.21	31.3	18	15	0.26	0.14	12	54	Software & Program
Monaco Coach (NY)	1.37	1.64	19.7	6	6	1.69	1.61	23	156	Mobile Homes & RVs
Swift Energy Co. (NY)	0.87	1.04	19.5	11	8	1.40	0.70	34	104	Oil & Gas Operations
J. Jill Group, Inc. (Nq)	0.29	0.34	17.2	8	4	0.47	0.25	21	50	Retail (Catalog & Mail Order)
Orbotech Ltd. (Nq)	0.58	0.68	17.2	6	4	0.83	0.45	5	112	Sci & Tech Instruments
Gevity HR, Inc. (Nq)	0.82	0.95	15.9	5	5	1.00	0.91	1	322	Business Services
DocuCorp Inter'l (Nq)	0.49	0.56	14.3	5	5	0.58	0.52	31	221	Software & Program
ValueClick, Inc. (Nq)	0.23	0.26	13.0	5	4	0.30	0.24	31	249	Advertising
MicroStrategy Inc. (Nq)	1.70	1.91	12.4	9	8	2.22	1.75	16	na	Software & Program
Chattem Inc. (Nq)	1.32	1.46	10.6	6	6	1.50	1.42	44	48	Biotech & Drugs
Stelmar Shipping Ltd. (NY)	3.28	3.62	10.4	5	3	3.75	3.43	42	90	Water Transport
Insight Enterprises (Nq)	1.05	1.15	9.5	6	5	1.18	1.13	14	179	Retail (Catalog & Mail Order)

Exchanges: NY= New York Stock Exchange; A= American Stock Exchange; Nq= Nasdaq National Market

Source: Stock Investor Pro/Market Guide, I/B/E/S, and S&P Stock Guide. All data as of February 29, 2004.

roaches, you rarely see just one earnings surprise.

Revisions to earnings estimates lead to price adjustments similar to earnings surprises. When earnings estimates are revised significantly upward—5% or more—stocks tend to show above average performance. Stock prices of firms with downward revisions show below average performance.

Changes in estimates reflect changes in expectations of future performance. Perhaps the economic outlook is better than previously expected, or maybe a new product is selling better than anticipated.

Revisions are often precursors to earnings surprises. As the reporting period approaches, estimates normally converge toward the consensus. A flurry of revisions near the reporting period can indicate that analysts missed the mark and are scrambling to improve their estimates.

The listing on the previous pages represents the results of a screen for firms with significant earnings estimate revisions. AAI's *Stock Investor Pro*, which contains earnings estimates from I/B/E/S, was used to perform the screening. The screen used data that was current as of February 29, 2004.

About half of the 8,000 securities in *Stock Investor* include earnings estimates. The first screen filtered out those firms with less than four estimates for the current fiscal year. This filter helps to ensure that revisions actually reflect a change in general consensus, not just a change by one analyst. However, requiring that a stock have at least four analysts reporting earnings estimates will knock out most of the very small capitalization stocks.

The next filter required that the firm have an upward change in its current and subsequent fiscal-year estimates over the course of the last month, leaving about 260 firms. The stocks were divided into three market capitalization groups. The percentage change in the estimate from one month to the next was calculated. The 20 firms within each group with the greatest percentage increase in estimate are listed.

The stocks that remained after the screen was applied include a number of technology firms experiencing better than expected demand for their products. For example, producers of semiconductors such as Applied Materials, Broadcom, Analog Devices, and Semtech at that time were seeing demand for their products.

Whenever your filter involves the percentage change of a variable, there is a risk that firms with very small base numbers will dominate. With an increase of 300%, ON Semiconductor had the highest percentage revision in the medium-cap group. This jump in percentage change was caused by an increase in earnings estimate from \$0.02 to \$0.08. When working with percentage changes, it is helpful to use an additional screen to confirm the significance of the change.

The number of estimates for each firm is provided to help gauge the interest in the firm and the meaningfulness of the overall estimates. The larger the firm, the greater the number of analysts that will track it.

The number of revisions upward indicates how many analysts have revised their estimates upward in the last month. When compared to the number of analysts making estimates, this is a confirmation of the significance of the percentage change in estimates.

You can put more faith in a revision if a large percentage of the analysts tracking a firm have revised their estimates. Aetna, located in the large-cap group, had all of the 19 analysts tracking the firm revise their estimates upward. This compares with TeleTech Holdings, which had only one of its five estimates revised upward.

Some investors screen for earnings estimate revisions by looking at the number of revisions. Stock prices of firms with more upward revisions than downward revisions have shown above average returns, while those with more downward revisions tend to underperform.

Examining the range of estimates provides an indication of the consensus within the group of estimates. A wide range of estimates would point to great disagreement among analysts, indicating greater uncertainty and greater chance for an earnings surprise.

The 21 estimates for LM Ericsson range from a low of \$0.35 to a high of \$1.38—a range of \$1.03. This is a wide range compared to the Aetna earnings estimates, which range from \$6.25 to \$6.75. The price move can be more dramatic, however, if an earnings surprise occurs for a firm with a very tight range of earnings estimates.

The last two columns of data help to illustrate the price moves as the market adjusted to changes in expectations. Most of these stocks had experienced fairly strong price moves on both a short-term (three-month) and intermediate-term (one-year) basis. A larger price change for the last quarter than for the last year would indicate a positive change in price trend.

Earnings estimates are important. They embody the expectations built into a stock price. The box on the next page summarizes the main points to keep in mind when dealing with consensus earnings estimates.

Definitions of Screens and Terms

I/B/E/S EPS Estimate: The consensus of analysts' estimates for earnings per share currently and one month ago as reported by I/B/E/S, a firm that surveys analysts. Reflects the earnings level built into the stock price.

EPS Estimate % Change: The percentage change in the consensus earnings estimate over a one-month period. Prices of firms with positive revisions tend to perform better than average.

No. of Estimates: Number of analysts providing earnings per share estimates. Indicates how widely a firm is followed. Widely followed firms tend to react more quickly to estimate revisions.

No. of Revisions Up in Mo.: The number of analysts who revised their earnings per share estimate for the stock upward during the month. Provides an indication of strength of the earnings revision.

EPS Estimate Range: The highest and lowest earnings per share estimates given by analysts for most recent month-end. Indicates the level of consensus among analysts. The wider the range, the greater the divergence in opinion and the greater the chance for an earnings surprise.

Price Change: The percentage change in the stock price for the last quarter and last year.

Using Consensus Earnings Estimates

Earnings Estimates

- Firms with high expected earnings growth tend to underperform the market because it is difficult to meet the market's high expectations. Companies with low earnings expectations tend to do better than expected.
- Prices embody current earnings estimates.

Earnings Estimate Revisions

- Stock prices of firms with significant upward revisions (5% or more) generally outperform the market. Firms with significant downward revisions underperform the market.
- Earnings revisions are often a precursor to earnings surprises. Stock prices react positively to upward revisions.

Earnings Surprise

- Stock prices of firms that significantly exceed their earnings expectations (positive earnings surprise) outperform the market,

while those with negative earnings surprises underperform.

- The earnings surprise effect is long-lasting. The greatest effect of the surprise can be felt immediately, but the effect of the earnings surprise can be seen for as long as a year. The effect of the surprise tends to be longer-lasting for negative earnings surprises.
- The stock prices of large firms adjust to surprises more quickly than those of small firms.
- Earnings surprises often follow in groups—the cockroach effect.
- The chance of an earnings surprise is greater if the range of estimates for a company is wide.
- The price move can be more dramatic, however, if an earnings surprise occurs for a firm with a very tight range of earnings estimates.



Finding Stocks With Winning Characteristics

One way to develop a strategy is to base it on what has worked in the past. With that in mind, one widely quoted study examined the characteristics of a group of winning stocks. The goal was to try to find common traits that could be used to develop trading rules for identifying potential winners.

The findings* are reviewed in Appendix G, which discusses the application of the nine trading rules to a database of stocks.

Applying the rules in a series of stock screens, of course, requires a computer. Can the trading rules be adapted to a basic strategy for beginners? This chapter focuses on a basic approach that looks for stocks with some of the major characteristics of stock market winners.

WINNING CHARACTERISTICS

In the original study, nine characteristics of winning stocks were found. However, several characteristics were related, and they can be broken down into four common attributes:

- A price-to-book-value ratio less than 1.0. Book value is total assets less all debt. A price-to-book-value ratio below 1.0 indicates the share price of the firm is below the net assets of the firm—an indication that it may be undervalued.
- Accelerating earnings. An indication that the firm may be starting to turn around.
- High and increasing relative strength. Relative strength is a technical indicator of the price change of the stock relative to the price changes of other stocks. Stocks with strong recent relative strength are considered likely to continue their performance—in other words, they have momentum that is greater than the market's movement.
- Fewer than 20 million common shares outstanding. This characteristic eliminates the very large firms. Stocks with a lesser number of shares outstanding are considered more likely to have stronger price performance once the market “discovers” the stock and starts to bid up share price since there is less liquidity.

An approach based on these characteristics looks for stocks that are out-of-favor and neglected (low price-to-book-value), starting to turn around financially (accelerating earnings), just starting to be recognized by the market (high and rising relative strength),

*See “Investment Characteristics of Stock Market Winners,” by Professor Marc Reinganum, September 1989 AAll Journal.

and likely to register strong price appreciation (lower number of shares outstanding).

THE INITIAL LIST

A big hurdle in applying this approach is developing your initial list. That's because you are looking for stocks that fit several criteria. There are lists of stocks that meet the rules individually, but it would be rare to find a stock that appeared on each list.

The easiest approach is to start with a list of stocks that meet one rule—low price-to-book-value ratios, for instance. Then glance over the full-page reports (in a source such

Drawing Up an Initial List: Sources of Information

Lists of Stocks With Low Price to Book Values

Standard & Poor's Earnings Guide

Standard & Poor's Corp., 55 Water St., New York, N.Y. 10041; 800/221-5277, www.standardandpoors.com.

Monthly

Includes summary (one-line) information and focuses on earnings and earnings growth estimates; note that these one-line summaries do not include book value. However, the front includes one short useful list:

Potential Value Plays: These firms are selling at a discount to net tangible book value, a maximum price-earnings ratio (based on next year's earnings estimates) of 15 and a projected 10% increase in earnings.

Value Line Investment Survey

Value Line Publishing Inc., 220 E. 42nd St., New York, N.Y. 10017-5891; 800/634-3583, www.valueline.com.

Part 1 Summary & Index:

The tables in the back (see index for the page numbers) include this useful list:

Widest Discounts from Book Value: This consists of stocks whose ratios of recent price to book value are the lowest.

Relative Strength Figures

Investor's Business Daily

Investor's Business Daily Inc., P.O. Box 92042, Los Angeles, Calif. 90009; 800/831-2525, www.investors.com.

Daily

Relative strength and other momentum indicators are listed for every stock in the daily stock listings. [Price-earnings ratios, a measure of undervaluation that can be a proxy for low price-to-book-value ratios, are listed for every stock each Wednesday.]

Value Line Investment Survey

Value Line Publishing Inc., 220 E. 42nd St., New York, N.Y. 10017-5891; 800/634-3583, www.valueline.com.

The one-page descriptions of each stock include a graphical depiction of a stock's relative strength, so you can tell by glancing at the graph whether it is high and rising.

Corporate Financial Data (including book value, quarterly earnings and no. of shares)

Standard & Poor's Stock Reports

Standard & Poor's Corp., 55 Water St., New York, N.Y. 10041; 800/221-5277, www.standardandpoors.com.

Company reports are found in volumes according to the exchange on which they are traded; presents 10 years of data.

Value Line Investment Survey

Value Line Publishing Inc., 220 E. 42nd St., New York, N.Y. 10017-5891; 800/634-3583, www.valueline.com.

Analyses approximately 1,700 common stocks; presents 15 years of data.

as Value Line Investment Survey) of each of the stocks in the first list, looking to see if any of those stocks fulfill the other requirements.

Lists of firms with low price-to-book-value ratios are suggested as the starting point because book value screens can be harder to find. Only a relatively small number of financially strong firms will be selling for prices that are below book value. Relative strength can also be difficult to find, so restricting your initial search to sources that provide at least one of these two figures will save you some time. However, more firms will have high relative strength (above 70% in the Investor's Business Daily listing) than will pass the book value screen. Information on accelerating earnings and number of shares outstanding are available from sources that provide full-page data listings on individual stocks (such as Value Line and S&P).

Once a potential stock is spotted, the next step is an in-depth evaluation to determine the fair market value.

AEROSPACE INC.: AN EXAMPLE

Aerospace Inc. offers a good example of a firm that meets the restrictions of this approach. The first step was to look at a list of companies that were selling for below book value. Then, each of those stocks was examined using the full-page listings in the Value Line Investment Survey.

Aerospace Inc. passed the first test here, which was to have a high and rising relative strength. The quarterly earnings box was then examined to see if quarterly earnings were trending up. Aerospace Inc.'s quarterly earnings were spotty—the firm had rising annual earnings for the prior two years, and in most instances during that time, quarterly earnings relative to the same quarter in the prior year (to account for seasonal adjustments) were rising, but in two instances out of eight they declined.

Lastly, the number of shares outstanding was checked to see if it was below 20 million, and Aerospace Inc. passed this test as well.

Aerospace Inc. is in the aerospace/defense industry and is a manufacturer of components and systems for the defense, commercial transportation, and industrial markets. The company suffered, along with the industry, from the cuts in defense spending. At the time of this writing, its recent acquisition of an aerospace actuation business is (according to Value Line) expected to help existing product applications and open up opportunities with aircraft manufacturers; the acquisition is expected to add \$0.50 to share earnings in this year.

Value Line also noted that its European operations were turning around, due to cost-control measures and a turnaround in the European market. However, these improvements were not expected to add to the bottom line for several quarters. At the time of the screen, the company still faced risk from further declines in the defense budget.

PER SHARE DATA AND FINANCIAL RATIOS

The first item to note is the fiscal year end, which is October 1. The Year 5 figures on the valuation worksheet include all of Aerospace Inc.'s Year 5 fiscal year based on a projec-

tion for the last quarter of the fiscal year, made one month into the quarter.

The next item of note is the price trend. In Year 3, both its high and low prices were considerably below those of the prior years; more recently, it had come back from that Year 3 drop. This is one indication of its price momentum—not surprising given its relative strength trend, which had also risen since Year 3.

On a longer-term basis, the price of the stock had dropped considerably from its 10-year high levels. Clearly the stock had been out of favor for quite some time.

Year-by-year earnings per share dropped substantially in Year 3. They had started to trend up since then, reaching the Year 1 level by mid-Year 5. That made the five-year earnings growth rate -0.3% ; the growth rate since the Year 3 low was 43% . Value Line projected Year 6 earnings per share of \$1.30, most of which was due to the company's recent acquisition. However, Value Line expected earnings to continue to grow after Year 6.

Except in Year 3, the firm had paid no dividends. Value Line was not projecting any dividend payments over the next few years. Book value per share remained relatively steady, and the firm's book value at the time of the screen was at its five-year average. In terms of financial ratios, Aerospace Inc.'s mid-Year 5 price-earnings ratio at 16.0 was above its five-year average high. Clearly, the market's expectation for the firm was positive, based on a stronger outlook for future earnings. Aerospace Inc.'s dividend yield of 0% reflected its lack of dividend payments. The lack of dividend payments also produced a 0% payout ratio.

The Year 5 return on equity for Aerospace Inc. of 6.8% was close to the industry average, a sign that the firm might be returning to its pre-Year 3 levels. Return on equity measures how well the firm is managed both operationally and financially. To boost return on equity, a company must increase its profits from sales, manufacture its goods more efficiently, or increase the level of financial leverage. Aerospace Inc.'s use of financial leverage was way above the industry norm. In Year 5, its financial leverage increased by 30% , due to the recent acquisition. It is unlikely that this resulted in the most recent increase in return on equity, since the acquisition occurred recently; however, it could be a cause of future increases in return on equity.

VALUING THE COMPANY

The bottom of the valuation worksheet provides valuations using the earnings-based model. The dividend-based model is not used here, since no dividends have been paid.

For the earnings-based models, two valuations are provided: one using a Year 6 earnings per share projection based on the five-year average growth rate of -0.3% (resulting in a Year 6 EPS estimate of \$0.85), and one using the Value Line Year 6 earnings per share estimate (of \$1.30). The five-year averages for the high and low price-earnings ratios were also used in the worksheet.

The valuation using the five-year average growth rate produced a range of \$6.54 to \$11.22; the valuation using the Value Line Year 6 estimate produced a range of \$10.01

Valuation Worksheet

Company: Aerospace Inc. Current Price \$ 9.13 Date (8/31/Year 5)

Ticker _____ Exchange _____ Current P/E 16.0 Current Yield 0%

Financial Statement & Ratio Analysis

Per Share Information	Company						Industry or Competitor	Market	
	Year 1	Year 2	Year 3	Year 4	Year 5	5-Year Avg	Year 5	5-Year Avg	Year 5
	Price: High	10.00	9.50	7.60	9.80	9.60	9.30		
Price: Low	5.30	6.00	3.90	5.60	7.00	5.56			
Earnings per Share (EPS)	0.86	0.97	0.41	0.66	0.85	growth rate: -0.3%			
Dividends per Share (DPS)	0.00	0.00	0.28	0.00	0.00	growth rate: 0%			
Book Value per Share (BV)	11.66	12.93	12.62	11.99	12.55	12.35			
Financial Ratios									
Price-Earnings Ratio (P/E): Avg	8.9	8.0	14.0	11.7	9.8	10.5	11.0**	11.4	
High (High Price ÷ EPS)	11.6	9.8	18.5	14.8	11.3	13.2			
Low (Low Price ÷ EPS)	6.2	6.2	9.5	8.5	8.2	7.7			
Dividend Yield % (DY): Avg	0.0	0.0	5.4	0.0	0.0	0.0	2.8**	2.8	
High (DPS ÷ Low Price)	0.0	0.0	7.2	0.0	0.0	0.0			
Low (DPS ÷ High Price)	0.0	0.0	3.7	0.0	0.0	0.0			
Payout Ratio % (DPS ÷ EPS)	0.0	0.0	68.3	0.0	0.0	0.0	34.0	32.2	
Return on Equity % (EPS ÷ BV)	7.4	7.5	3.2	5.5	6.8	6.1	7.0	8.1	
Financial Leverage* %	122	107	115	107	156	121	33	33	

*long-term debt ÷ equity
Year 1 data is oldest; Year 5 is the most recent.

**Year 3

Earnings-Based Valuation Estimates

Using historical growth rate to project Year 6 EPS:

Average high P/E × estimated Year 6 EPS: $\frac{13.2}{7.7} \times 0.85 = \11.22 (high valuation estimate)

Average low P/E × estimated Year 6 EPS: $\frac{7.7}{13.2} \times 0.85 = \6.54 (low valuation estimate)

Using Value Line 1995 EPS estimate:

Average high P/E × estimated Year 6 EPS: $\frac{13.2}{7.7} \times 1.30 = \17.16 (high valuation estimate)

Average low P/E × estimated Year 6 EPS: $\frac{7.7}{13.2} \times 1.30 = \10.01 (low valuation estimate)

to \$17.16.

Aerospace Inc.'s price at the time of analysis was \$9.13. If Aerospace Inc. at this point were to continue its lackluster five-year average record, it would appear to have been fairly priced based on the valuation model. But if it were turning around, as Value Line suggested, it would have been a bargain. Clearly, a further understanding of the company—its products, competition, and market—would help in forming an opinion about the firm's outlook. The valuation worksheet suggests that the firm merited further investigation.

The basic approach used here adapts the stock winner characteristic rules in the initial screening phase, since it would be difficult to sort through a listing of stocks by hand and come up with those that best fit all the detailed trading rules in the original study. However, it is interesting to note how the firm stacks up according to those rules, and the box below does just that. [Appendix G discusses the rules in more detail.]

CONCLUSION

A careful examination of the assumptions is a critical part of the valuation and will help you identify factors that could be misleading in your final valuation.

While the worksheet examines quantitative factors, it is clear that many subjective factors go into the equation. To judge these factors, it is necessary to go beyond the statistics. Any final decision should be based on a better understanding of the company, its management, and its competitive environment. This can only be accomplished by a thorough reading of the firm's financial reports, as well as the reports and summaries on the firm and its industry.

Stock Market Winners: The Trading Rules and How Aerospace Inc. Stacked Up

Rules*	Did Aerospace Inc. Pass?
1) Price-to-book value less than 1.0	Yes. Current ratio: 0.72
2) Accelerating quarterly earnings—	
Consecutive quarters:	Yes. 19% between March and June; 44% expected between June and September
Quarter-on-quarter:	Yes. 25% between June Year 5 & Year 4; 176% expected between September Year 5 & Year 4
3) Positive 5-year earnings growth rate	No. Just slightly negative: -0.3%
4) Positive operating margin**	Yes. 12%
5) Relative strength rank of at least 70%	Yes. 77%
6) Increase in relative strength rank	Yes. Rank of 52% one quarter prior
7) Stock selling within 15% of two-year high	Yes. 93% of \$9.80 two-year high
8) Fewer than 20 million shares outstanding	Yes. 7.7 million shares outstanding

* There were nine trading rules in the study, but one involves proprietary data and is excluded here.

** Operating margin substituted for pretax profit margin



Appendix G

Applying the Rules for Stock Market Winners

One well-known study of stock performance, by Professor Marc Reinganum,* examined the common traits of a group of winning stocks. These types of examinations can be noteworthy if they help to establish financial relationships likely to hold true over time.

The goal was to establish the characteristics common to these stocks prior to their rise to super stock status. Nine trading rules that could be applied to a computerized database were developed that helped to identify the winners:

- Price-to-book-value ratio less than 1.00;
- Accelerating quarterly earnings;
- Positive five-year growth rate;
- Positive pretax profit margin;
- Relative strength rank of at least 70%;
- Relative strength rank of the stock in the current quarter is greater than the rank in the previous quarter;
- O'Neil Datagraph rating of at least 70;
- Stock selling within 15% of its maximum price during the previous two years; and
- Fewer than 20 million common shares outstanding.

The use of these rules or screening criteria produced returns significantly higher than the market. While the group of stocks passing the filter were slightly more risky than the market, the additional risk did not account for the extraordinary returns of the winners.

There can be problems encountered when trying to apply trading rules determined during a specific point in time with a specific group of stocks. This appendix discusses some of the difficulties in trying to interpret and apply these rules to a computer database of stocks in the real market environment.

LOW PRICE TO BOOK VALUE

When examined independently, the first screen—requiring that the price-to-book-value ratio be below one—produced the highest rate of return. This finding coincides with many studies that show that buying into neglected, out of favor stocks leads to investment success. While the market does a good job of valuing securities in the long run, in

*See “Investment Characteristics of Stock Market Winners,” by Professor Marc Reinganum, September 1989 AAll Journal.

the short run it can overreact to information and push the prices away from their true value. Measures such as price-to-book-value ratio, price-earnings ratio, and dividend yield help to identify which stocks may be truly undervalued.

The price-to-book-value ratio is determined by dividing market price per share by book value per share. Book value is generally determined by subtracting total liabilities from total assets and then dividing by the number of shares outstanding. It represents the value of the owners' equity based upon the historical accounting activities. If accounting truly captured the current values of the firm, then one would expect the current stock price to sell near this accounting book value. Over the history of a firm, many events occur that can distort the book value figure. For example, inflation may leave the replacement cost of capital goods within the firm way above their stated book value, or the purchase of a firm may lead to the establishment of goodwill, which is an intangible asset boosting the level of book value. Some services are more conservative in reporting book value and may subtract out the value of intangibles such as patents, copyrights, trademarks, or goodwill. Of course it makes these values incomparable with services that include intangibles. Different accounting policies among industries may also come into play when screening for low price-to-book stocks.

AII's *Stock Investor Pro* program was used to screen for the potential stock market winners. The first screen specified a price-to-book ratio below 1.5, leaving 1,970 companies out of a complete database of 7,875 NYSE, Amex, Nasdaq National Market, Nasdaq Small Cap and OTC stocks. The maximum price-to-book ratio level is higher than the original study so that a slightly larger group of companies would pass the complete set of filters. As a primary screen, specifying a price-to-book ratio below 1.0 led to about 11% of the companies passing the filter, versus about 22% passing the 1.5 price-to-book-value limit.

Valuation levels of stocks vary over time, often dramatically from bear market bottoms to bull market tops. During the depths of a bear market, many firms can be found selling for a price-to-book ratio less than one. In the latter stages of a bull market, few companies other than troubled firms sell for less than book value per share.

EARNINGS MOMENTUM

The low price-to-book screen is very good at identifying neglected firms, but secondary, or conditioning, screens are also needed to help identify which stocks may be poised for a turnaround. Quarterly earnings per share for winners rose on average 46% in the original study and exhibited an increase from the previous quarter's growth rate. Accelerating earnings attract attention, and may be one of the first signs that a company is poised for an upturn.

The earnings measure used in the original study was somewhat crude in that it did not consider the seasonality of quarterly earnings. A more useful technique is to compare one quarter to the same quarter last year, i.e., this year's second quarter is compared to last year's second quarter. Many firms have annual seasonal cycles, either in production or sales. Comparing similar quarters is one way of taking these seasonal changes into

consideration.

In our screen, earnings from continuing operations for the most recent two quarters were required to be above their respective quarters last year. This dropped the number of companies down to 610 from the 1,970 passing the screen.

To emphasize momentum or acceleration in quarterly earnings, the next criterion specified that the rate of change between the recent quarter and its counterpart last year be greater than the increase between the previous quarter and its counterpart. This momentum screen dropped the number of passing companies down to 252.

The listing on the following page presents the quarterly earnings per share figures used for the screening. Looking at the raw data can assist in judging the significance of any decisions based upon percentage changes. For example, very small earnings figures can lead to distorted growth rates. Allied Motion Technologies experienced a 900% increase in its latest quarter over the same quarter a year ago, but this increase was based upon a change in earnings per share from a loss of one cent to a gain of eight cents.

MINIMUM FUNDAMENTALS

As further proof that a company's fortunes have turned around, the next two criteria specified a minimum level of company fundamental performance.

The first criterion required that the five-year annual growth rate in earnings per share be positive. Applying this criterion cut the number of firms down to 87. In the original study, the five-year growth rate was based upon the most recent five years of quarterly data. The growth rates used in the screening are based upon the firm's fiscal-year data, which will not show intrayear turnaround as quickly as the trailing quarterly data.

The second criterion required that the pretax profit margin be positive. This is determined by taking sales and subtracting cost of goods sold, operating expenses, interest expenses, and depreciation and amortization, and dividing the result by sales. Requiring a positive pretax profit margin brought the number of companies down to 62.

Requiring a positive five-year earnings growth rate or a positive gross operating profit margin by themselves are not very restrictive criteria. However, they help to screen out some of the very weak firms that have some time to go before turning around, if ever. Some investors may be inclined to require not only a positive margin, but a high margin as a criteria. However, it is interesting to note that over the period of the original study, fundamental measures such as profit margins rose substantially during the major price moves. Requiring a high profit margin as a screening criterion would mean missing at least part of this major price advancement.

PRICE MOMENTUM

The next set of criteria help to identify stocks that have already shown upward price movement. Patience is required when selecting stocks using purely contrarian rules. It often takes time for the market to recognize value in the firm. The study indicated that technical measures such as strong and improving relative strength, a current stock price near its high, and a high Datagraphs ranking point to stocks likely to advance further.

Stock Market Winners Screen

Company (Exchange)	Price-to-Book-Value Ratio (*)	Quarterly Earnings per Share				Annual EPS Rate (%)	Rel Strgth Rank (%)	Price as % of 2-Yr Hi (%)	No of Shares Out-stand'g (Mil)	Industry
		Latest Qtr* Current Yr (\$)	Prior Qtr* Yr (\$)	Current Yr (\$)	Prior Qtr* Yr (\$)					
ACR Group, Inc. (OTC)	1.16	0.03	-0.01	0.13	0.11	2.1	88	97	10.7	Misc. Capital Goods
Allied Motion Tech (Nq)	1.46	0.08	-0.01	0.06	-0.09	15.1	70	91	5.0	Scientific & Technical Instruments
American Physicians Servs. (Nq)	1.37	0.34	0.13	0.32	0.20	12.5	78	96	2.2	Business Services

Exchanges: NY= New York Stock Exchange; A = American Stock Exchange;
Nq= Nasdaq National Market

Source: Stock Investor Pro/Market Guide, I/B/E/S; and S&P Stock Guide. All data as of February 29, 2004.

*calendar quarters

Definitions of Screens and Terms

Price-to-Book-Value Ratio: Market price per share divided by book value (assets less liabilities) per share. A measure of stock valuation relative to net assets. A high ratio might imply an overvalued situation; a low ratio might indicate an overlooked stock.

Quarterly Earnings per Share: Net income from continuing operations of a firm divided by the number of common stock shares outstanding. Comparison of quarterly earnings helps to provide an indication of accelerating earnings.

Annual EPS Growth Rate: Annual growth in earnings per share from continuing operations over the last five fiscal years. A measure of how successful the firm has been in generating

the bottom line, net profit.

Relative Strength Rank: Relative price change, computed here with the most recent quarterly price change given a weight of 40% and the three previous quarters each weighted 20%. The weighted price change is then compared to other stocks over the same time period.

Price as % of 2-Yr High: Most recent market price divided by highest market price over the last two years.

No. of Shares Outstanding: Total number of shares of stock held by shareholders. Provides an indication of the trading liquidity of the firm.

The weighted relative strength ranking was the primary price momentum indicator used in the study. The weighting required that the most recent quarterly price change be given a weight of 40% and the previous three quarters each weighted 20%. The weighted price changes were then ranked for all the stocks and the relative position indicated via percentage rank. Stocks with a 90% relative strength rank had a weighted price change better than 90% of all the firms.

The study indicated that the winners had relative strength rank of 70% or better before their main price move. When this criterion was applied it reduced the number of companies to 10. The study also indicated that it is best if relative strength rank also increased from the previous quarter. While this further screen was not applied to narrow the data set, this is the type of variable that could be investigated after the screening process.

The other price-based screening criterion developed in the study required that the current price be within 15% of the high price for the last two years. This rule reinforces the requirement of price strength. When applied to our list of stocks it cut the number of firms down to three.

The original study was performed using the Datagraph books (published by William O'Neil + Co. and sold primarily to institutional investors), which include both fundamental and technical data. It was found that the winners usually had a high Datagraph rating in the buy quarter. The Datagraph rating uses a proprietary weighting mix for "reported earnings, capitalization, sponsorship, relative strength, price-volume characteristics, group rank and other factors." Since most individuals will not have access to this charting and data service, it was not used in the screen. It is worth noting, however, that the other rules seem to reflect much of the information contained within the Datagraph rating.

LIMITED FLOAT


This criterion examines the number of shares outstanding, often termed the float. The study found that 90% of the firms had fewer than 20 million shares outstanding before their main price rise. The midpoint or median figure was 5.7 million shares, which doubled during the two years that each "winning" stock was held. This probably indicates many of the firms split their shares during their big price increase.

Some investors look for a stock to have a limited float with the belief that the price move on positive information will be magnified by a limited number of shares available. Applying this screening criterion did not cause any firms to drop out. It seems that in today's market the other screening criteria did a good job of filtering out the larger firms that have more shares outstanding.

The list of stocks passing all the screens is presented in the listing. They are ranked on the price-to-book-value ratio. The list represents a diverse set of relatively small firms. Like all screens, this list provides a beginning point for further in-depth analysis.

CONCLUSION

Examining the characteristics of past stock market winners might prove interesting. But



using all of the rules may lead to a very restrictive screen in the present. Screens can also be in some ways contradictory. In this case, there is a strong price-to-book neglect screen tied to look-at-me earnings and stock price movements.

But it is hard to argue with screens that try to find neglected stocks on the verge of a fundamental and technical turnaround.



Adapting the Lynch Principles to the Basic Approach

One of the best ways to learn about investing is to follow an example—preferably someone with a successful track record. One popular investment guru, Peter Lynch, portfolio manager of the Fidelity Magellan Fund in its heyday in the 1980s, has written several books that discuss the primary investment principles he followed when managing the enormously popular fund. This chapter focuses on a basic approach that follows his rules of thumb for beating the pros. Appendix H outlines the principles in more detail and discusses their use when screening a database of stocks.

THE LYNCH PRINCIPLES

The Stock-Picking Checklist (Appendix H) summarizes the main principles outlined by Mr. Lynch in his books “One Up on Wall Street” (Fireside, 2000) and “Beating the Street” (Simon & Schuster, 1994).

Mr. Lynch advocates a “bottom-up approach,” which means that you start your search process at the ground floor, looking for individual companies that appear to have promising products or services. Once you have identified a promising candidate, you then carefully research and analyze it, checking first to see if your initial impression is supported by financial evidence and the firm’s competitive environment and if the stock can be purchased at a reasonable price.

This process entails searching for candidates one by one, rather than beginning with a list of candidates that may have passed an initial screen. How do you find initial candidates? Mr. Lynch strongly advises that you put your own experience and knowledge to work, looking at companies with products and services with which you are familiar and thus more capable of analyzing.

Once you have found a promising candidate, he suggests that, among other things, you look for the following features:

- A price-earnings ratio relative to the earnings growth rate of less than 0.5
- A price-earnings ratio that is in the lower range of its historical average and below the industry average
- Stable and consistent earnings
- Low levels of debt

Other positive signs include: high net cash per share relative to the stock price; low

Sources of Information

Pre-Screened List of Firms With Low P/Es Relative to Earnings Growth Rate

Standard & Poor's Earnings Guide

(Monthly) Includes summary (one-line) information and focuses on earnings, earnings growth estimates. The front periodically includes: Strong EPS & Dividends to P/E Ratio: These are firms whose five-year annual earnings growth rate plus the current dividend yield relative to their price-earning ratio is greater than 2. [Seeking firms with a ratio above 2 is equivalent to the Peter Lynch rule that uses the inverse formula—dividing the price-earnings ratio by the earnings growth rate—and seeks ratios below 0.5.] These firms also must pay dividends and have five years of positive earnings.

Lynch's Laws: Finding Information

Price Earnings Ratios, Earnings Growth, and Historical Earnings: The three most complete sources for historical corporate financial information are Mergent's Handbook of Common Stock, Standard & Poor's Stock Reports, and the Value Line Investment Survey. In addition, don't forget the primary source—the company's own annual financial reports. Corporate annual reports will include both summary and detailed financial statements; the summaries cover a five- or 10-year span. More detailed financial statements are available in the 10-K. Both reports can be requested from the company.

Comparing Co. P/Es to Industry P/Es: S&P's Industry Reports provides a monthly review of 80 industries. In addition, data on industry indexes is provided in The Wall Street Journal (Dow Jones Industry Groups daily), Investor's Business Daily (Industry Prices every Tuesday), and Barron's (a listing of the Dow Jones Industry Groups is given in the Market Statistics Section). Value Line reports industry ratios in its industry analysis sections, but these can be dated.

Balance Sheet Strength: The sources listed for price-earnings ratios and historical earnings are good sources for balance sheet strength.

Cash Position: The sources listed for price-earnings ratios and historical earnings are good sources for cash position. The monthly S&P Stock Guide reports current cash holdings, as well as long-term debt (Peter Lynch subtracts long-term debt per share from cash per share to determine a firm's net cash per share position.)

Level of Institutional Holdings: Value Line's full-page company summaries include a box called "Institutional Decisions" that reports the number of shares held by institutions. S&P's Stock Guide gives both the number of shares held by institutions and the number of institutions holding shares in the company. S&P Stock Reports and Mergent's Handbook also report the percentage held by institutions.

Insider-Buying: Value Line's full-page company summaries include a box called "Insider Decisions" that reports insider buying.

Company Share Buybacks: Value Line often discusses buybacks in the write-up section. Also check in Value Line to see if shares outstanding has been decreasing over time, indicating company buybacks. Similar information is available in S&P Stock Reports and Mergent's Handbook.

Addresses for Sources

Value Line Investment Survey, Value Line Publishing Inc., 220 E. 42nd St., New York, N.Y., 10017-5891; 800/634-3583, www.valueline.com.

Standard & Poor's Stock Reports, Standard & Poor's Earnings Guide, Standard & Poor's Industry Surveys, 55 Water St., New York, N.Y. 10041; 800/221-5277, www.standardandpoors.com.

Mergent's Handbook of Common Stock, 580 Kingsley Park Dr., Fort Mill, S.C. 29715; 800/342-5647, www.mergent.com.

levels of institutional holdings; insider buying by a number of insiders; and company share buybacks. Mr. Lynch also favors smaller firms over larger firms and dislikes “hot” stocks in “hot” industries.

Once you have spotted a promising candidate, the information source list can help you gather the information you need for further analysis. Many of these sources may be available in your local library. However, don’t forget one of the single best sources of information—the company itself, from which you can request its financial reports. Notice that there is one pre-screened list that appears in the S&P Earnings Guide (firms that meet Mr. Lynch’s low price-earnings ratio to growth rate rule-of-thumb)—you may find a firm or two listed there in which you are familiar with its product or service.

Once you have spotted a potential stock, the next step is an in-depth evaluation.

TECHNOLOGY CORP.: AN EXAMPLE

Technology Corp. offers an example of how a firm could be analyzed using the Lynch principles as a guide. Technology Corp. was selected because it had a low price-earnings ratio relative to its growth rate at the time of writing and because it is in a sector we are familiar with, the computer sector.

Technology Corp. is a designer and manufacturer of micro-processors, used in many personal computers. Its controllers and memory chips are also heavily used in communications, automation, and other electrical equipment.

Technology Corp. is, of course, a technology stock, a “hot” industry. Typically, the product life cycle within the industry is very short and getting shorter. Technology Corp. spent 11% of its \$11 billion in sales on research and development to advance its products and keep one step ahead of its competitors. The chip business is very cut-throat, and Technology Corp. has used the court system, faster product introductions and lower prices to meet the competition.

At the time of the analysis, Technology Corp.’s future growth in earnings was dependent on greater volume of sales with lower profit margins, common to industries that reach a more mature phase. Technology Corp. was pushing adoption of its latest generation chip at a much faster rate than earlier designs and rolling out more efficient plants to help keep costs down.

PER SHARE INFO & FINANCIAL RATIOS

Value Line was used as the primary source for financial information. Figures for Year 5 were based on Value Line projections for the remainder of the year.

The first item of note is the price trend. Technology Corp.’s stock price rose steeply and steadily from Year 1 through Year 4; in late Year 5, it had fallen from its Year 5 high earlier in the year of \$73.50.

Year-by-year earnings per share steadily increased since Year 1, with an average five-year growth rate of 38.6%. That certainly meets the Lynch rule of thumb of stable and consistent earnings; on the other hand, this high growth rate could put it in the “hot stock” category. More recently, however, earnings growth slowed: between Year 4 and Year 5,

earnings went from \$5.16 to \$5.90 per share—an increase of 14%. Value Line predicted a continuation of that 14% growth rate, with a Year 6 earnings per share projection of \$6.75. Interestingly, this more recent earnings growth slowdown actually made Technology Corp. more appealing from the Lynch perspective—Technology Corp. might no longer be the “hot” stock of several years ago.

Technology Corp. did not start paying dividends until Year 3, when it paid a \$0.05 dividend in the last quarter. Dividends were paid for the full year in both Year 4 and Year 5, during which dividends were increased from \$0.20 to \$0.22—a 10% increase. While that time span is too short to indicate any long-term trend, it did appear that Technology Corp. was now committed to paying some level of dividends. Value Line estimates dividends per share of \$0.27 in Year 6. The fact that this firm started to pay dividends—and they were increasing—may have been another sign that this firm was moving away from its quick-growth phase and was starting to mature.

In terms of financial ratios, Technology Corp.’s price-earnings ratio, at 11.1, was below its five-year average high. Clearly, the market’s expectation for the firm had dropped, based on its declining earnings growth rate. How did Technology Corp.’s price-earnings ratio compare with the industry average? Value Line’s price-earnings ratio for the industry was dated. Technology Corp.’s price-earnings ratio was lower, however, than the industry average of 16.8 reported by S&P Industry Reports. With Technology Corp.’s price-earnings ratio below its historical average and the industry average, it may have been an indication of undervaluation.

Technology Corp.’s October Year 5 dividend yield of 0.4% was so low that it is probably insignificant—no investor was buying this stock for the dividend.

The low level of dividends resulted in a very low payout ratio of 3.7% in Year 5—below the industry average of 17.0%.

The Year 5 return on equity of 25.1% for Technology Corp. was much higher than the industry average, and had increased over time, although it had slid back from its Year 4 high of 28.8%.

Return on equity measures how well the firm is managed both operationally and financially. To boost return on equity, a company must increase its profits from sales, manufacture its goods more efficiently, or increase the level of financial leverage. Technology Corp.’s use of financial leverage (long-term debt divided by equity) was far below the industry norm—its five-year average was 6.4% compared to an industry average of 17.2%. Technology Corp., therefore, appeared to be maintaining its high return on equity from increasing sales—reflected in the year-by-year earnings increases.

What about some of the other Lynch Laws that are not found on the valuation worksheet?

Using Value Line as a source, Technology Corp. violated most:

- Technology Corp. was not small—it had a market capitalization (419 million common shares outstanding times \$61.50 share price) of over \$25 billion;
- It had a low level of net cash per share relative to its stock price—its net cash per share position was \$4.59 (cash assets of \$2,300 million less \$375 million in long-term debt, divided by 419 million common shares outstanding) compared to its \$61.50

Valuation Worksheet*

Company: Technology Corp. Current Price \$ 61.50 Date (9 / 30 / Year 5)

Ticker _____ Exchange _____ Current P/E 11.1 Current Yield 0.4%

Financial Statement & Ratio Analysis

Per Share Information	Company						Industry or Competitor	Market	
	Year 1	Year 2	Year 3	Year 4	Year 5	5-Year Avg	Year 5	5-year avg	current
	Price: High	26.00	29.60	45.80	74.30	73.50			
Price: Low	14.00	18.90	23.30	42.80	56.00				
Earnings per Share (EPS)	1.60	1.91	2.51	5.16	5.90	growth rate: 38.6%			
Dividends per Share (DPS)	0.00	0.00	0.05*	0.20	0.22	growth rate: 10.0%**			
Book Value per Share (BV)	8.99	10.83	13.01	17.94	23.55	14.86			

Financial Ratios

Price-Earnings Ratio (P/E): Avg	12.5	12.7	13.8	11.3	11.0	12.3	14.4***	18.75 [†]	18.0
High (High Price ÷ EPS)	16.3	15.5	18.2	14.4	12.5	15.4			
Low (Low Price ÷ EPS)	8.8	9.9	9.3	8.3	9.5	9.1			
Dividend Yield % (DY): Avg	0.0	0.0	0.0	0.4	0.3	0.4**	0.4***	0.5 [†]	2.9
High (DPS ÷ Low Price)	0.0	0.0	0.0	0.5	0.4	0.4**			
Low (DPS ÷ High Price)	0.0	0.0	0.0	0.3	0.3	0.3**			
Payout Ratio % (DPS ÷ EPS)	0.0	0.0	0.0	3.9	3.7	3.8**	17.0	13.0	
Return on Equity % (EPS ÷ BV)	17.8	17.6	19.3	28.8	25.1	21.7	10.0	12.5	
Financial Leverage %	9.6	8.2	4.6	5.7	3.8	6.4	15.1	17.2	

*one quarter only

**2-year figures

***Year 4

[†]Year 1–Year 4

Year 1 data is oldest; Year 5 is the most recent.

Valuation Estimates

Model based on earnings (using Value Line Year 6 EPS estimate):

Average high P/E × estimated Year 6 EPS: $\frac{15.4}{9.1} \times 6.75 = \103.95 (high valuation estimate)

Average low P/E × estimated Year 6 EPS: $\frac{9.1}{6.75} \times 6.75 = \61.42 (low valuation estimate)

Model based on dividends (using Year 6 DPS estimate based on dividend growth rate):

Estimated Year 6 annual DPS ÷ average low DY: $\frac{0.24}{0.003} = \$80.00$ (high valuation estimate)

Estimated Year 6 annual DPS ÷ average high DY: $\frac{0.24}{0.004} = \$60.00$ (low valuation estimate)

Use decimal form for DY. For instance 5.4% would be 0.054.

- per share stock price;
- Over 71% of its shares were held by institutions (298 million shares held by institutions divided by 419 million common shares outstanding);
- There had been no insider buying decisions over the past year;
- No share buybacks were mentioned in the Value Line company summary, and over time, the number of shares outstanding has increased; and
- It was (and is) in a hot and highly competitive industry.

VALUING THE COMPANY

The bottom of the valuation worksheet provides valuations using both the earnings-based model and the dividends-based model.

For the earnings-based models, the Value Line estimate for Year 6 earnings were used on the worksheet, since this is a more conservative estimate. A projection based on Technology Corp.'s five-year growth rate of 38.6% would suggest Year 6 earnings of \$8.17; however, given the slowdown in earnings growth, this higher earnings projection is probably too optimistic.

Using the Value Line projections, the model produces a high valuation of \$103.95 and a low valuation estimate of \$61.42.

The dividend-based model uses a Year 6 dividends per share projection of \$0.24 based on the 10% increase over the past year. Although this time period does not indicate a trend, it does produce a more conservative estimate than the Value Line Year 6 projection of \$0.27. The dividend-based model produces a valuation range of \$60.00 to \$80.00. However, given the insignificant dividend yield paid by Technology Corp., this model is less useful in valuing this stock—investors were not making decisions based on the dividend-paying capability of this firm, and therefore dividends were unlikely to play a significant role in the pricing of the stock.

Technology Corp.'s price at the time of the analysis of \$61.50 was close to the low valuation indicated by the earnings-based model and suggested that the firm may have been undervalued. Technology Corp. also met some of the Lynch rules of thumb, but not all, as outlined above. These preliminary analyses suggested that the stock may merit further investigation but with some skepticism; certainly familiarity with the industry would be helpful.

CONCLUSION

A careful examination of the assumptions is a critical part of the valuation and will help you identify factors that could be misleading in your final valuation. While the worksheet examines quantitative factors, it is clear that many subjective factors go into the equation. To judge these factors, it is necessary to go beyond the statistics.

Any final decision to add a stock to your portfolio should be based on a better understanding of the company, its management, and its competitive environment. This can only be accomplished by a thorough reading of the firm's financial reports, as well as the reports and summaries on the firm and its industry.



Appendix H

Stock Screening à la Peter Lynch

Examining the investment techniques of successful money managers can prove insightful when trying to establish or refine your personal techniques. In this chapter, we explore the techniques of investment manager Peter Lynch and how they can be applied to screen a computerized database of stocks.

LYNCH'S LAWS

In two of his books, “One Up on Wall Street” and “Beating the Street,” Peter Lynch describes the analytical process that led to his success at the helm of Fidelity’s Magellan fund:

- *Stick with industries and companies you know and understand.* Getting ideas is a critical starting point for a bottom-up stockpicker like Peter Lynch. He advocates looking around at companies and products for stock ideas and then performing in-depth analysis to determine if the stock is a buy. This would be contrasted with a top-down approach that starts the analysis with an overall economic forecast that leads to sectors, industries, and finally companies expected to perform well.

In looking for ideas, Lynch favors areas that you understand and where your intimate knowledge is a competitive advantage. For example, if you are a pharmacist, use your knowledge to analyze the drug industry. Also notice trends around you—is a new store in the mall a hit? If so, investigate it. Leverage your knowledge as a consumer, hobbyist, and professional in your investments.

- *Do your research before investing.* Lynch observes that many people follow a hunch or a tip and invest in a company without doing any research. Very often these are the same individuals who spend many hours researching which coffee maker is the best on the market and scouring the papers to discover which store offers the best price.
- *Is it a buy?* Finding a good company is only half of the battle in making a successful investment. Buying at a reasonable price is the other. Lynch looks at both earnings and assets when it comes to valuing stocks. An earnings examination focuses on the ability of the company to earn future income. The greater the earnings prospects, the more valuable the company. Increasing earnings will translate to increasing prices. Assets are important in determining the base value of a company should it be split up and sold off in pieces.
- *Carefully consider the price-earnings ratio.* The earnings potential of a company is a primary determinant of company value. At times, the market may get ahead of itself and overprice even a stock with great prospects. The price-earnings ratio helps to

keep your perspective in check. The ratio compares the current price to the most recently reported earnings. Stocks with good prospects should sell with higher price-earnings ratios than stocks with poor prospects.

- *How does the price-earnings ratio compare to its historical average?* By studying the pattern of price-earnings ratios over a period of several years, you can develop a sense of the normal level for the company. This knowledge should help you avoid buying into a stock if the price gets ahead of the earnings or send an early warning that it may be time to take some profits in a stock you own. If a company does everything well, you may not make any money on the stock if you paid too much for it.
- *How does the price-earnings ratio compare to the industry average?* Comparing a company's price-earnings ratio to that of the industry may help reveal if the company is a bargain. At a minimum, it leads to questions as to why the company is priced differently. Is it a poor performer in the industry, or is it just neglected? Lynch's ideal investment is a neglected niche company, controlling a market segment, in an unglamorous industry that would be difficult and time-consuming for a competitor to break into.
- *How does the price-earnings ratio compare to its earnings growth rate?* Companies with better prospects should sell with higher price-earnings ratios. A useful valuation technique is to compare the price-earnings ratio to the earnings growth rate. A price-earnings ratio of half the level of historical earnings growth is considered attractive, while ratios above two are considered unattractive.

Lynch refines this measure by adding the dividend yield to the earnings growth. This adjustment acknowledges the contribution that dividends make to an investor's return. The ratio is calculated by dividing the price-earnings ratio by the sum of the earnings growth rate and the dividend yield. With this modified technique, ratios above one are considered poor, while ratios below 0.5 are considered attractive.

- *How stable and consistent are the earnings?* It is important to examine the historical record of earnings. Stock prices cannot deviate very long from the level of earnings, so the pattern of earnings growth will help to reveal the stability and strength of the company. Ideally, earnings should move up consistently.
- *Avoid hot companies in hot industries.* Lynch prefers to invest in companies with earnings expanding at moderately fast rates (20% to 25%) in non-growth industries. Extremely high levels of earnings growth rates are not sustainable but continued high growth may be factored into the price. A high level of growth for a company and industry will attract a great deal of attention from both investors, who bid up the stock price, and competitors, who provide a more difficult business environment.
- *What is the level of institutional holdings?* Lynch feels that the bargains are located among the stocks neglected by Wall Street. The lower the percentage of shares held by institutions and the lower the number of analysts following the stock, the better.
- *How large is the firm?* Small firms have more upside potential than large firms. Small firms can easily expand in size while large firms are limited. A small firm like Starbucks can double in size much more easily than a large firm such as General

- Electric.
- *How strong is the balance sheet?* A strong balance sheet provides maneuvering room as the company expands or experiences trouble. Lynch is especially wary of bank debt, which can usually be called in by the bank on demand.
 - *What is the level of net cash per share?* Lynch likes to look at the net cash per share to help discover both a support for the stock price and the financial strength of the company. The net cash per share is calculated by adding the level of cash and cash equivalents, subtracting the long-term debt, and dividing the result by the number of shares outstanding.
 - *Are insiders buying the stock?* Insider buying of shares is a positive sign, especially if it is spread among a number of individuals. While insiders may have many reasons for selling holdings, they generally buy stock when they feel it is an attractive investment.
 - *Is the company buying back shares?* Lynch favors companies that buy back their shares over companies that choose to expand into unrelated businesses. Share buybacks become an issue once companies start to mature and have cash flow that exceeds their capital needs. The share buyback will help to support the stock price and is usually performed when management feels that the current stock price is favorable.

APPLYING THE LYNCH SCREEN

While Peter Lynch is a bottom-up, kick-the-tires type of stockpicker, some of his principles are useful screening criteria. Our first screen excluded financial firms. Peter Lynch is a big fan of financial stocks and presents a series of screens he uses to help select banks and savings and loans in “Beating the Street.” We had to exclude them from the general screen, however, because their financial statements cannot be directly compared to other firms. AAI’s *Stock Investor Pro* program was used to perform the screen. Using data as of February 29, 2004, we were left with 6,535 non-financial companies out of a total of 7,875 stocks.

Price-earnings ratios are an important aspect to Lynch’s analysis and make an excellent primary screen. Our screen used the ratio of price-earnings to the earnings growth rate plus the dividend yield. A ratio less than or equal to 0.50 was specified as a cut-off, leaving 405 companies.

Lynch is wary of companies growing too quickly, so the next filter specified a maximum earnings per share growth rate of 50%. The number of firms passing this filter was 253.

The final filter required that the long-term debt-to-capital ratio for each company be less than its industry average, leaving 85 firms.

The screens we applied seemed to favor smaller firms. Of the 85 firms that passed the screen, only seven were large-cap stocks—nine were medium-cap, and 69 were small-cap. All of the large- and medium-cap firms that passed the filter are shown, ranked in ascending order by the modified price-earnings to growth ratio. Twenty small-cap firms with the lowest modified price-earnings to growth ratio are listed.

Low P/E to Earnings Growth Stocks

Company (Exchange)	Modified P/E to EPS Growth (x)	P/E Ratio (x)	EPS Growth Rate (%)	Div Yield (%)	Long- Term Debt to Cap (%)	Shares Held by Inst'ns (%)	Net Cash per Share (\$)	Price (\$)	Price as % of 52-Wk High (%)	Industry
Large Cap (above \$5 billion)										
Apache Corp. (NY)	0.3	12.3	48.7	0.6	26.3	81.6	-7.18	41.17	95	Oil & Gas Operations
ITT Industries (NY)	0.4	18.1	47.0	0.9	20.2	83.8	-0.51	75.50	96	Conglomerates
Imperial Oil Limited (A)	0.4	14.0	35.1	1.5	12.9	14.4	-0.84	45.85	94	Oil & Gas - Integrated
Sempra Energy (NY)	0.4	9.9	21.5	3.2	48.6	63.1	-15.22	31.70	99	Natural Gas Utilities
Canadian Nat'l Railway (NY)	0.5	15.9	32.9	1.0	33.1	61.4	-15.93	59.22	97	Railroads
Rockwell Collins (NY)	0.5	21.1	40.8	1.1	18.0	58.6	-0.77	32.54	92	Aerospace & Defense
Union Pacific Corp. (NY)	0.5	15.7	29.3	1.9	38.8	80.0	-28.48	63.64	91	Railroads
Average	0.4	15.3	36.5	1.5	28.3	63.3	nmf	nmf	95	
Mid Cap (\$1 billion to \$5 billion)										
National Fuel Gas (NY)	0.2	10.9	40.7	4.3	49.3	50.2	-13.09	25.30	92	Natural Gas Utilities
Pogo Producing (NY)	0.2	9.9	43.8	0.4	25.1	85.8	-4.85	45.37	90	Oil & Gas Operations
Fresh Del Monte (NY)	0.2	6.4	31.0	3.1	3.4	37.4	0.86	25.46	88	Crops
Rent-A-Center (Nq)	0.3	15.5	44.7	0.0	46.8	94.0	-6.88	32.54	93	Rental & Leasing
Allstream Inc. (Nq)	0.4	12.8	23.8	5.3	2.4	71.3	12.41	51.51	86	Communications Servs
Cameco Corp. (NY)	0.4	17.6	40.3	1.0	9.7	52.9	-2.04	47.73	78	Metal Mining
Houston Exploration (NY)	0.5	8.8	18.2	0.0	19.6	40.8	-5.20	37.62	96	Oil & Gas Operations
Polaris Industries (NY)	0.5	17.2	33.9	2.2	5.3	76.7	3.03	84.69	92	Recreational Products
Celanese AG (ADR) (NY)	0.5	11.0	21.8	1.2	14.5	33.5	-7.94	40.20	96	Chemicals - Plastics and Rubbers
Average	0.4	12.2	33.1	1.9	19.6	60.3	nmf	nmf	90	
Small Cap (below \$1 billion)										
Nordic Amer. Tanker (A)	0.1	6.6	31.8	23.9	21.9	16.7	-3.03	19.26	96	Water Transport
Atlantic Coast Air. (Nq)	0.2	4.0	16.9	0.0	27.2	86.1	-0.85	7.24	50	Airline
CPI Aerostructures (A)	0.2	5.2	30.5	0.0	0.0	21.9	0.71	9.70	78	Aerospace & Defense
Canada Southern Petro. (Nq)	0.2	5.0	28.5	0.0	0.0	0.3	1.23	4.92	81	Oil & Gas Operations
Champps Entertain. (Nq)	0.2	7.2	35.8	0.0	28.0	78.8	-1.53	8.84	93	Restaurants
Sands Regent (Nq)	0.2	6.2	27.8	0.0	13.0	5.2	-0.53	7.35	99	Casinos & Gaming
Ablest Inc. (A)	0.3	7.5	28.5	0.0	0.0	6.3	0.49	7.45	76	Business Services
American Pacific (Nq)	0.3	10.0	27.0	5.2	0.0	64.8	2.87	8.07	73	Chem Manufacturing
Forgent Networks (Nq)	0.3	7.1	25.9	0.0	0.0	22.3	0.79	1.98	50	Computer Services
Gentiva Health Servs. (Nq)	0.3	6.6	19.5	0.0	0.0	94.0	3.03	13.80	94	Healthcare Facilities

(continued on next page)

Low P/E to Earnings Growth Stocks (continued)

Company (Exchange)	Modified P/E to EPS Growth (x)	P/E Ratio (x)	EPS Growth Rate (%)	Div Yield (%)	Long- Term Debt to Cap (%)	Shares Held by Inst'ns (%)	Net Cash per Share (\$)	Price (\$)	Price as % of 52-Wk High (%)	Industry
Gundle/SLT Environ'l (NY)	0.3	10.8	33.3	0.0	8.0	41.0	1.02	18.32	85	Fabricated Plastic & Rubber
Key Technology (Nq)	0.3	12.5	43.3	0.0	9.1	32.9	0.67	14.99	78	Misc Capital Goods
M/I Homes, Inc. (NY)	0.3	8.1	32.5	0.2	32.7	68.4	-12.81	44.96	97	Construction Servs
Manatron, Inc. (Nq)	0.3	9.7	29.5	0.0	0.0	5.1	1.75	8.85	91	Computer Services
Mossimo, Inc. (Nq)	0.3	7.4	22.1	0.0	0.0	13.8	0.57	4.35	63	Apparel/Accessories
Movie Star, Inc. (A)	0.3	7.7	20.6	0.0	0.0	1.8	0.01	1.62	59	Apparel/Accessories
Nat'l Home Health Care (Nq)	0.3	10.3	36.4	0.0	0.0	23.6	2.69	9.90	89	Healthcare Facilities
Sanderson Farms (Nq)	0.3	10.3	31.4	0.9	9.0	37.2	0.41	35.35	90	Food Processing
Talk America Holdings (Nq)	0.3	4.4	17.0	0.0	31.8	67.8	-0.44	11.70	73	Communications Servs
Utah Medical Prods. (Nq)	0.3	5.8	23.4	0.0	0.0	40.3	0.20	24.70	93	Medical Equip & Supplies
Average	0.3	7.6	28.1	1.5	9.0	36.4	nmf	nmf	80	

nmf = no meaningful figure; Exchanges: NY= New York Stock Exchange; A = American Stock Exchange; Nq= Nasdaq National Market

Source: Stock Investor Pro/Market Guide, I/B/E/S, and S&P Stock Guide. All data as of February 29, 2004.

Most of the companies passing the screens had relatively low price-earnings ratios when compared to the current market level of 20.6. The historical growth rates, however, were well above average, with many ranging between 30% and 40% per year. These are historical growth rates and are not sustainable for a long period of time; some are due to special situations. Forgent Networks' growth rate of 25.9% was due to a one-time earnings boost. Looking only at earnings from continuing operations and the year-by-year earnings figures would present a better picture of earnings growth and consistency.

The dividend yield for one of the securities—Nordic American Tanker—should clue an investor in to a special situation. This firm was created to manage and own three tankers chartered to BP Shipping. The original seven-year charter is currently up for year-by-year renewals with renewal unlikely. Nordic Atlantic Tanker pays out all profits through its dividend. Nordic American Tanker is treated as a passive foreign investment company for income tax purposes. This unique situation highlights the importance of in-depth analysis after any basic screen.

The ratio of long-term debt to capital is generally lower for small-cap stocks than for the medium- and large-cap stocks. Small-cap stocks have a more difficult time raising capital through the bond market than larger stocks and often turn to banks for capital. A close examination of the financial statements, especially in the notes to the financial statement, should help to reveal the use of bank debt.

Definitions of Screens and Terms

Modified P/E to EPS Growth: Current price-earnings ratio divided by the sum of the historical earnings growth rate and dividend yield. Ratios below 0.5 are considered attractive. Ratios above 1.0 are considered poor.

P/E Ratio: Market price per share divided by most recent 12 months' earnings per share. A measure of the market's expectations regarding the firm's earnings growth and risk.

EPS Growth Rate: Annual growth in earnings per share from total operations over the last five fiscal years. A measure of how successful the firm has been in generating the bottom line, net profit.

Dividend Yield: Indicated annual dividend divided by market price.

Long-Term Debt to Capital: Long-term debt divided by the total of long-term debt and preferred and common equity. Provides a

measure of the financial strength of the company. The lower the figure, the stronger the balance sheet.

Shares Held by Institutions: Percentage of shares outstanding that are held by institutions. Provides an indication of the level of Wall Street interest in the stock.

Net Cash per Share: The total of all cash and cash equivalents less long-term debt, divided by the number of shares outstanding. Provides an indication of the financial strength of the company and a support for the stock price.

Price: Most recent market price as of February 29, 2004.

Price as % of 52-Wk. High: Most recent market price divided by highest market price over the last 52 weeks.

A large number of the listed companies have very high percentage of shares held by institutions, a negative in Lynch's opinion.

Net cash per share highlights a potential hidden asset for a number of companies and is of greater interest for companies that are distressed, turnaround potentials, or asset plays.

CONCLUSION

Only a basic level of screening was performed when presenting the Lynch-based screens. Much of the analysis advocated by Peter Lynch is subjective in nature, requiring hands-on analysis. As Peter Lynch stresses, it is possible to succeed at investing, but you must be willing to do your work.

Stock-Picking Checklist

-
- Invest only in industries and companies you understand and know the specific reason that you are buying the stock. → Your analysis should center on the factors that will move the stock price
-
- How does the price-earnings ratio compare to the growth rate in earnings and dividends? → Look for low P/Es compared to earnings growth plus the dividend yield
-
- How does the price-earnings ratio compare to its historical average? → Look for P/E in lower range of historical average
-
- How does the price-earnings ratio compare to the industry? → Look for P/E below industry average
-
- How stable and consistent are the earnings? → Study the pattern of earnings, especially how they reacted during a recession
-
- How strong is the balance sheet? → Look for a low level of debt, especially bank debt
-
- What is the cash position? → Net cash per share should be high relative to stock price
-
- Avoid hot companies in hot industries. → Be wary of earnings growth rates above 50%
-
- Big companies have small moves, small companies have big moves. → Small companies should be favored in your search, they have more upside potential
-
- What is the level of institutional holdings? → Look for low percentage of shares held by institutions and number of analysts following stocks
-
- Are insiders buying stock? → Insider buying by a number of insiders is a positive sign
-
- Is the company buying back shares? → If so, this will support the stock price and probably indicates the company has been ignored, but management is confident

Additional Resources on AAI.com

AAII STOCK SCREENS AREA

For updates to the approaches discussed in this book, along with 50 other stock-picking strategies, visit the AAI Stock Screens area of AAI.com. Once a month, the performance of each screen is calculated and lists of the companies that currently pass the screens are posted. AAI stock screens and passing company lists are designed to guide you in finding investment ideas.

AAII TOP WEB SITES GUIDE

This guide, updated annually, lists the best Web sites for investors in a variety of categories. Most of these sites are free of charge; however, stock screening sites tend to charge, especially for advanced screening services.

For building lists of prospective stocks: Stock Screening Sites allow users to search a database for stocks that match their specified criteria. Some may provide predefined stock screens or modules that allow users to create their own custom screens.

For researching individual companies: Stock Data Sites offer basic financial statement data, earnings estimates, and company and industry analysis.

For tracking consensus opinions on a stock: Analyst Estimates, Ratings & Recommendation Sites provide analysts' consensus earnings estimates for the current fiscal quarter and year as well as going forward for the next few quarters and years.

VALUATION WORKSHEET IN EXCEL

AAII's Download Library includes two Excel spreadsheet (Windows) versions of the Valuation Worksheet used in this book. Formulas are programmed into the spreadsheets, allowing you to enter basic data on a stock and view the calculated ratios and valuations.

Valuation 1 Worksheet

Valuation 2 Worksheet

“The American Association of Individual Investors is an independent, nonprofit corporation formed in 1978 for the purpose of assisting individuals in becoming effective managers of their own assets through programs of education, information, and research.”



© Copyright 2004 by the American Association of Individual Investors. All rights reserved.

AMERICAN ASSOCIATION OF INDIVIDUAL INVESTORS

625 North Michigan Avenue, Chicago, Ill. 60611-3151

(312) 280-0170

(800) 428-2244

E-mail: members@aaii.com

Web Site: www.aaii.com