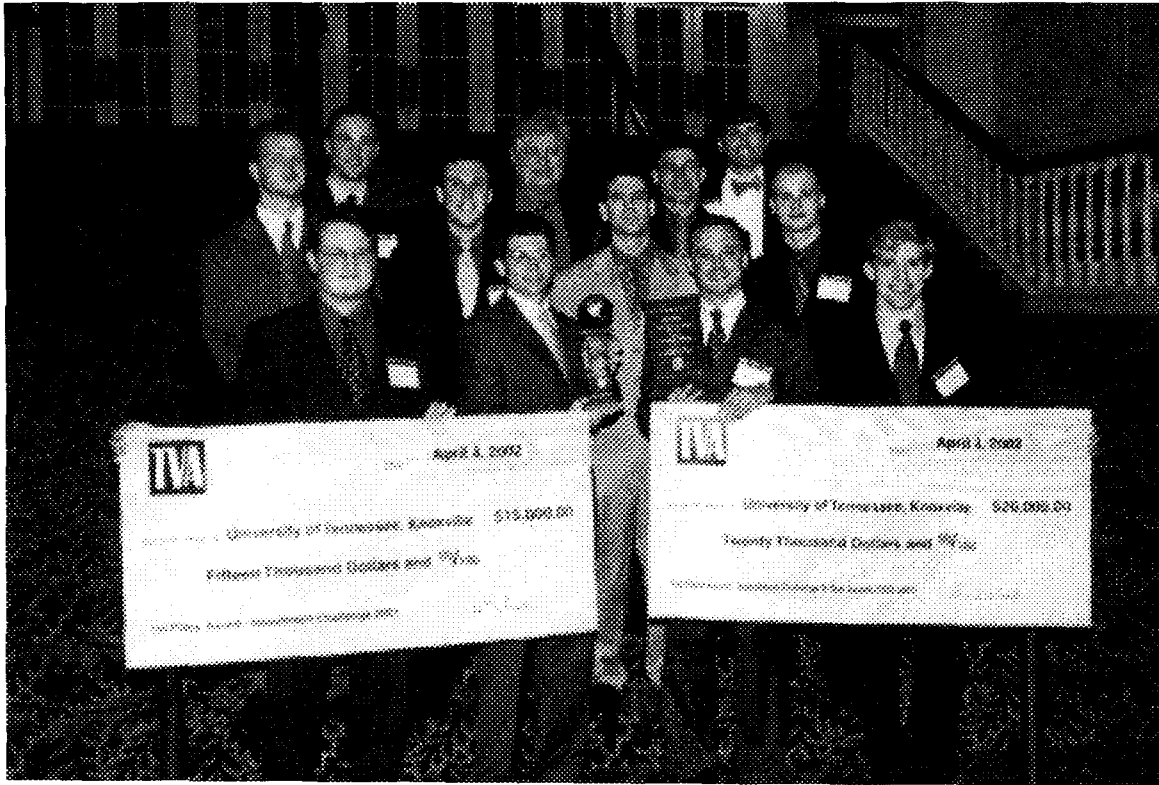




Developing an Investment Philosophy: A Guide to the Warren Buffet Model

Erick Clifford, April 30, 2002

May 3, 2002

Ms. Tammy Murphy
Registrar's Office
209 Student Services
CAMPUS 0200

Dear Ms. Murphy,

This letter indicates that Broderick Clifford, [REDACTED], a College Scholar, has completed his senior project. This is the final requirement of the program.

Yours,

A handwritten signature in cursive script, appearing to read "D. Tandy".

David W. Tandy
Director, College Scholars Program

COLLEGE SCHOLARS PROJECT APPROVAL

ERICK CLIFFORD

Scholar

DR. AL AUXIER

Mentor

DEFINING AN INVESTMENT PHILOSOPHY: THE TVM/C GUIDE TO THE WARREN BUFFETT MODEL
Project Title and Completion Date

COMMITTEE MEMBERS' SIGNATURES

(Minimum 3 Required)

Albert L. Auxier, Associate Prof. of Finance

[Signature]

GA/Finance Dept.

[Signature]

Finance Department

PLEASE ATTACH A COPY OF THE SENIOR PROJECT TO THIS SHEET AND RETURN BOTH TO THE PROGRAM DIRECTOR. THIS PAGE SHOULD BE DATED AND COMPLETED ON THE DATE THAT YOUR DEFENSE IS HELD.

DATE COMPLETED 5-02-02

Date: Tue, 07 May 2002 15:17:08 -0400
From: Al Auxier <auxier@utk.edu>
Subject: Erick Clifford's Independent Study Grade
X-Sender: auxier@pop.utk.edu
To: "Dr. Tandy" <dtandy@utk.edu>
X-Mailer: QUALCOMM Windows Eudora Light Version 3.0.6 (32)
X-Virus-Scanned: by amavisd-milter (<http://amavis.org/>)

Dr. Tandy,

Erick Clifford has conducted research under my supervision, and the result is a fine Investments Manual designed to make more productive early entrants into the TVA Investment Challenge program -- a real-money, 19-university TVA sponsored investment performance competition.

Erick's work is of very high quality, and I recommend that he be assigned an A grade for successful completion of this work.

Thank you.

Al Auxier

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Preface

I am a firm believer in giving credit where credit is due. Anyone who has read a Berkshire Hathaway Chairman's Letter is aware that Buffett too is fond of complementing those responsible for his success. The appreciation he expresses to his professor, Ben Graham, is appropriate for inclusion in this paper, for it captures the importance of an influential Mentor. I have had the pleasure of spending the better half of my undergraduate study under such a Mentor, Dr. Al Auxier. To him I owe a great debt (Long-term debt of course). Fortunately in his lending he supplied me the tools for repaying it.

A bit of nostalgia: It was exactly 50 years ago that I entered Ben Graham's class at Columbia. During the decade before, I had enjoyed – make that *loved* – analyzing, buying and selling stocks. But my results were no better than average.

Beginning in 1951 my performance improved. No, I hadn't changed my diet or taken up exercise. The only new ingredient was Ben's ideas. Quite simply, a few hours spent at the feet of the master proved far more valuable to me than ten years of supposedly original thinking.

In addition to being a great teacher, Ben was a wonderful friend. My debt to him is incalculable.¹

Dr. Auxier's personal investment performance consistently outpaces the investment herd on Wall Street. His record could have undoubtedly reserved him a spot amongst the most successful professional money managers should he have chosen to forego teaching. However, he saw the returns of investing in students as a chance for long-term rewards much greater than anything ever gained in the market. His greatest returns will be earned for many years to come.

¹ Warren Buffett, 2000 Annual Report, p. 19

Ships will sail around the world but the Flat Earth Society will flourish. There will continue to be wide discrepancies between price and value in the marketplace, and those who read their Graham & Dodd will continue to prosper.²

Introduction

There are a great number of books lining the shelves of our nation's bookstores and, presumably, those of American homes which claim to hold the key to the investment treasure chest. As with most things that seem too good to be true, investing made easy is not investing at all; it is something more akin to gambling. I have never met or read of anyone building substantial wealth in a casino, and unfortunately here too the house always wins. Investing is not easy. However, a well-trained student of investments can beat the house.

Becoming a successful investor is a time and effort intensive endeavor. In fact, I can think of no simpler and more transparent comparison than to explain the development of investing prowess in the context of athletics. The investor must first understand his strengths and limitations, what Warren Buffett³ describes as defining a "circle of competence." The size of this circle is not important, but knowing its boundaries is essential. An honest assessment of one's own ability allows the investor to properly position himself to use his strengths and defend against having his weaknesses exploited.

From this point the student of investments must engage himself in mental and physical exercises that will prepare him for the challenges and opportunities of the sport.

² Warren Buffett, *Superinvestors from Graham-and-Doddsville*, p. 301 of the Appendix of Benjamin Graham's The Intelligent Investor .

Rigorous training distinguished by an intense work ethic will position the student to enter the game with discipline and intelligence. However, all is in vain if one pursues victory without a clearly defined game-plan. Like the quick and strong rookie who enters his first boxing match with a well-coached but aging veteran, an unfocused investor will frantically throw punches that miss the mark. Despite being physically superior, the rookie quickly exhausts his advantage. This reckless approach results in his being severely punished.

Talent can be out-coached and out-worked in the athletic arena. The same principle applies to investments. An athlete can run the race faster than anyone else, but he had better be running the right direction. Therefore, it is important to maximize the effectiveness of your hard work by applying it within the right system. The most successful system was developed over seventy-years ago by the legendary “coach” Benjamin Graham⁴. His disciples have been consistently winning championships for the past five decades.

Despite the track record of his trainees (most notably Warren Buffett), business schools across the country insist on spending the majority of their time teaching about Modern Portfolio Theory, Efficient Market Theory and Beta. These financial theories call for abstract mathematical reasoning that often leaves students confused and frustrated. They appeal to the more “talented” students, for they suggest that Wall Street’s consensus view that intellectual superiority is directly correlated with investment success. The research collected within this paper suggests otherwise. In fact, Graham had something to

³ Buffett is the COE of Berkshire Hathaway and arguably the world’s foremost investment authority. At the time of this writing, he is the second richest man in the world.

say on this matter: “In the stock market the more elaborate and abstruse the mathematics the more uncertain and speculative the conclusion we draw therefrom... Whenever calculus is brought in, or higher algebra, you could take it as a warning signal that the operator was trying to substitute theory for experience.”⁵

With so many brilliant minds at work on Wall Street, it is of some significance to note that the majority of money managers consistently lag the market indexes. What could be the reason for this lag? In short, few money managers take the time to figure out what works and develop a set of investment principles to guide their investment decisions before setting out to manage money. They forget that championship teams play according to championship game-plans. This is an issue that Charlie Munger⁶ spoke about brilliantly in an address where he spoke of the need to develop models to guide our behavior: “Without models or principles, one is just flailing in the dark and mistaking luck for success.”⁷

Therefore, it should be the goal of every student interested in consistently outperforming the market indexes to learn and adopt an investment model from which he can direct his investment decisions. It is not surprising that noted investor Sir John Templeton⁸ is a proponent of studying success: “It’s only common sense to study success – not only in investments, but in all facets of life.”⁹ Thus, it shall be the purpose of this

⁴ Graham was a professor of investments at Columbia Business School, mentor to Buffett, and author of Security Analysis and The Intelligent Investor. He also ran Graham-Newman Corporation, a successful investment vehicle.

⁵ Michael Lewis, Liar’s Poker, Penguin, 1989, p. 65.

⁶ Charlie Munger is the Vice-Chairman of Berkshire Hathaway. A detailed story of his life can be read in Janet Lowe’s new biography titled Damn Right!

⁷ Christopher H. Browne, Value Investing and Behavioral Finance, 2000, p. 2.

⁸ Sir John Templeton was born in 1912, raised in Winchester, Tennessee, educated at Yale (’34) and was a Rhodes Scholar. He is noted for his success as the lead manager of the Templeton Growth Fund.

⁹ Outstanding Investor Digest Homepage

paper to outline such a model whereby students can benefit from a streamlined collection of insight from Warren Buffett, arguably the world's most successful investor.

The information presented within should be beneficial to anyone interested in learning more about investing. However, this paper was written for the specific purpose of introducing the new members of the Tennessee Valley Authority Investment Challenge team to the overall philosophy and strategy that has allowed the University of Tennessee to claim both the 2001 one-year and three-year investment performance championships. Therefore, topics that do not apply to the TVAIC portfolio performance, taxes for example, have been omitted from this text. In short, this paper should benefit beginning investors, but should not be considered a primary reference.

Before engaging in investing you should have a healthy respect for study and discipline, the prerequisites for success. If you find that you have neither the time nor the discipline required for implementing our investment model, you should consider a dollar-cost-averaging approach to index fund investing. Consistently investing in a low-fee index fund, say Vanguard's Total Stock Market Index Fund, requires minimal effort and will allow you to out-perform most investment professionals over an investment lifetime. In reference to this strategy, Buffett counsels, "Paradoxically, when 'dumb' money acknowledges its limitations, it ceases to be dumb."¹⁰

The remainder of the text will outline the TVAIC investment philosophy, introduce the screening, information gathering, and valuation techniques used during implementation, and submit case examples of actual buy and sell decisions.

¹⁰ Warren Buffett, Chairman's Letter, 1993 Annual Report, p. 15.

An Explanation of the TVA Investment Challenge Program

In 1996 the TVA Board established the Nuclear Decommissioning Trust Fund to meet the financial obligations of decommissioning the corporation's nuclear units. As of November 30, 2000, the fund totaled \$760 million.

As part of the process of diversifying the financial management of the Trust Fund, the corporation allocated \$1.9 million to create the TVA Investment Challenge Program. This program, which represents an innovative partnership with 19 public universities in the Tennessee Valley region, gives students real-world experience in investment management.

Each of the 19 universities that participate in the Investment Challenge sets up a program for the management of a \$100,000 portfolio. Under a faculty member's guidance, the students devise long-term strategies for the portfolios, manage the funds, and provide regular performance reports to TVA. Annual awards are presented to the schools whose portfolios generate the best returns.

The Investment Challenge is an important part of TVA's economic development mission. It nurtures the educational infrastructure that is vital to the Valley's continued growth, and it provides invaluable training for the future business leaders of the region.¹¹

TVAIC Guidelines Governing Portfolio Decisions

Goal

¹¹ This explanation and further details of the TVAIC can be found at www.tva.com.

The investment goal of the portfolio is to provide TVA with a strategic “core-oriented” allocation to the overall domestic equity market. Manager has been selected by TVA as portfolio manager of this strategic allocation. Manager’s assignment is to construct and actively manage the portfolio in a manner consistent with this investment goal and to add value relative to return opportunities that could be achieved from a passive exposure to this market segment. The assets of the portfolio are tax-exempt.

Objective

The investment objective of the portfolio is to achieve long-term capital growth by investing in marketable U.S. common stocks with a risk profile that is similar to the risk profile of the market benchmark. Specific investment objectives are intended to define quantifiable measures by which the results of the portfolio will be measured and evaluated on an ongoing basis. The performance results and investment characteristics of the portfolio will be measured and evaluated relative to an overall measure of the large stock segment domestic equity market, a universe of other professionally managed core-oriented equity managers and other universities managing TVA decommissioning funds (together with Manger, hereafter “University Mangers”). The universe of other professionally managed accounts is defined as the Wilshire Large Core Equity Universe. Therefore, the portfolio should strive to meet or exceed the following performance objectives:

- Generate a total return in excess of the S&P 500 Index over a one-to three-year horizon.

- Generate a total return that ranks in the top 50% of the Wilshire Large Core Equity Manager Universe.
- Generate a total return that ranks in the top 15% of the University Manger Universe over a one-to three-year horizon.

Guidelines

The following points highlight the investment guidelines that have been established for the portfolio. Manger is expected to follow these guidelines carefully while implementing and executing the portfolio strategy.

- *Asset Allocation*

The portfolio is expected to be invested exclusively in U.S. listed equity securities. Any cash equivalent investment should represent “frictional” or operational amounts and not strategic allocations. Therefore, cash equivalents should not exceed 5% of the portfolio at any time. Should market conditions suggest a hostile environment where this guideline may be detrimental to the financial well being of TVA, Manager should communicate suggested tactical adjustments to this guideline with authorized representatives of TVA. Cash equivalent balances are expected to be invested in a short-term investment fund managed by the assigned custodian bank.

- *Diversification*

Portfolio performance is expected to achieve value added results through active management decisions. However, the portfolio is expected to be diversified with

respect to the exposures to economic sectors, industries, and individual stocks.

The following diversification guidelines apply to the construction of the portfolio:

- The maximum allocation to any economic sector (sectors will be defined by Wilshire Associates Incorporated) is 40% of portfolio assets. As of September 30, 1997, the economic sector weightings for the S&P 500

Index were as follows:

• Capital Goods	5%
• Consumer Durables	2%
• Consumer Non-Durables	31%
• Energy	10%
• Finance	16%
• Materials & Services	8%
• Technology	18%
• Transportation	1%
• Utilities	9%

- No single issue should exceed 10% (at market value) of the portfolio. If an issue exceeds the 10% allocation guideline, the manager will have one calendar quarter to rebalance the portfolio to meet this guideline
- The portfolio is expected to be constructed with a minimum of 15 individual stocks.

- *Market Capitalization*

The majority of the portfolio is expected to primarily be invested in well established, large market capitalization companies. The portfolio may also invest in less established, small capitalization companies. However, based on the strategic role of this portfolio in the context of the overall investment program, no more than 35% of the portfolio may be invested in small capitalization

companies. For this purpose, small capitalization is defined as companies with a market capitalization of less than \$1 billion. Companies with a market capitalization below \$100 million in market capitalization after purchase shall be reported to TVA and monitored carefully. The portfolio shall not have more than 5% invested in securities that have drifted below \$100 million.

- *Other Transactions and Policies*

- American Depositary Receipts (“ADR’s”) may be used to construct the portfolio. However, because of the strategic role of the portfolio, positions in stocks traded as ADR’s are limited to no more than 15% of the portfolio market value. The 15% limitation includes foreign securities traded on U.S. Exchanges that are not ADR’s.
- Prohibited Transactions – The portfolio is prohibited from investing in any of the following investment vehicles or activities unless approved by an authorized representative of TVA: Any securities issued by an investor owned electric utility or independent power producers; Fixed income securities; Non-marketable securities (including private debt securities and/or direct placements); Non-dollar denominated securities; Commingled funds (including mutual funds); Convertible or preferred securities; Warrants; Commodities; Real estate investments (Including Real Estate Investment Trusts); Short sales; Margin purchases; Swaps (index or rate of return) and Securities lending.

- Derivatives Policy – Manager is not authorized to use derivative securities (defined as options and futures). More specially, Manager is prohibited from using any form of derivative security that effectively leverages the portfolio.

How to Judge Investment Performance

For Long-Term Investors, owning an index fund that tracks the S&P will produce reasonably satisfactory results over time. Therefore, any small advantages annually over the index *must* be rewarding. Buffett has managed to beat the S&P index in all but four of the last thirty-six years averaging an annual margin of 11.6%. His Average Annual Gain During the same period of 22.6% versus an 11% gain by the S&P is truly remarkable in the investment profession.¹²

Here is Buffett on judging investment performance: “*Any* investor can chalk up large returns when stocks soar, as they did in 1997. In a bull market, one must avoid the error of the preening duck that quacks boastfully after a torrential rainstorm, thinking that its paddling skills have caused it to rise in the world. A right-thinking duck would instead compare its position after the downpour to that of the other ducks on the pond.”¹³

Buffett’s extraordinary relative performance is even more impressive if one factors in that the S&P 500 numbers are pre-tax whereas Berkshire’s numbers are after-tax. If a corporation such as Berkshire were simply to have owned the S&P 500 and accrued the appropriate taxes, its results would have lagged the S&P 500 in years when

¹² See Berkshire’s Corporate Performance vs. the S&P 55, Appendix Table I

¹³ Warren Buffett, 1997 Chairman’s Letter, p.1.

that index showed a positive return, but would have exceeded the S&P in years when the index showed a negative return. Over the years, the tax costs would have caused the aggregate lag to be substantial.

Utilizing Buffett's investment strategy the TVAIC team has outperformed the S&P 500 in every year of its existence. In 2001, the fund earned a positive 24 % return compared to the S&P return of a negative 11.9%. Over the last three years the fund returned a positive 73% while the S&P returned a negative 3%. These returns beat all of the nineteen universities in the contest and the majority of money managers. We have even outpaced Buffett's performance over the last three years, although this is not a fair comparison. The huge capital base Buffett is working with serves an anchoring effect on returns: "The size of our equity capital... makes it certain that we cannot maintain our past rate of gain, or for that matter, come close to doing so."¹⁴

TVAIC Investment Philosophy

The investment management principles practiced by the TVAIC Portfolio Managers derive from the work of the late Benjamin Graham, professor of investments at Columbia Business School and author of Security Analysis and The Intelligent Investor and Warren Buffett, CEO of Berkshire Hathaway and student of Graham. Our team seeks to appraise the worth of a company, what Graham called "intrinsic value," by determining the present-value estimate of the cash that can be taken out of a business during its remaining life.

¹⁴ Warren Buffett, Chairman's Letter, 1991 Annual Report, p. 1.

Investments are made at a significant discount to intrinsic value, normally 40% to 50%, which Graham called an investor's "margin of safety." In the Appendix to Graham's *The Intelligent Investor*, Buffett offers an illustration of this concept:

You ... have to have the knowledge to enable you to make a very general estimate about the value of the underlying businesses. But you do not cut it close. That is what Ben Graham meant by having a margin of safety. You don't try and buy businesses worth \$83 million for \$80 million. You leave yourself an enormous margin. When you build a bridge, you insist it can carry 30,000 pounds, but you only drive 10,000 pound trucks across it. And that same principle works in investing. (Emphasis added.)

The importance of having an "enormous" margin of safety is directly correlated to the impossibility of telling the future. We would be wise to note the observation of Arthur Schlesinger, Jr.: "We humans are simply not much good at foretelling the future."¹⁵ In fact, Buffett compares those who attempt to predict stock market earnings and growth prospects to fortunetellers: "We've long felt that the only value of stock forecasters is to make fortune tellers look good."¹⁶

A study conducted by Patricia M. Dechow and Richard G. Sloan, titled *Returns to Contrarian Investment Strategies: Tests of Naïve Expectations Hypotheses*¹⁷, illustrates the difficulty of forecasting future results. The study compares analysts' forecasts of five-year earnings per share growth rates to the actual rate of e.p.s. growth attained over the five years subsequent to the date of the forecast. The sample consists of 23,203 firm-years between 1981-1992 for firms that had analysts' forecasts of five year e.p.s. growth

¹⁵ Arthur Schlesinger, Jr., "The Futility of Futurism, *The Wall Street Journal*, December 12, 1977, p. 16.

¹⁶ Warren Buffett, Chairman's Letter, 1992 Annual Report, p. 2

available on I/B/E/S, were traded on the NYSE, ASE, or NASDAQ, and were covered by Compustat.

**Can Analysts Predict E.P.S. Growth Over the Next 5 Years?
Companies Ranked on Analysts' Consensus Estimate of E.P.S. Growth Rate
over the Next Five Years, 1981-1992**

	Low									High
	1	2	3	4	5	6	7	8	9	10
Analysts' Consensus Estimate of Earnings per share Growth Rate over the next five years	4.1%	8.3%	10.1%	11.6%	12.9%	14.8%	16.2%	19.3%	23.3%	36.2%
Actual Growth Rate of Earnings per share over the next 5 years	-0.9	5.2	5.9	6.0	6.3	6.2	7.8	6.7	13.4	

The above results indicate that investment analysts have been unable to predict actual growth rate of earnings per share for the next five years. The analysts' five-year earnings per share forecasts, on average, were significantly above the actual rate of e.p.s. growth rate that occurred over the next five years. Furthermore, the most optimistic five-year e.p.s. growth rate forecasts were also the most inaccurate.

Studies like this one lend credibility to Buffett's assertion that using precise numbers is foolish. Therefore, we use a range of conservative numbers in our assumptions. This strategy ensures that we err on the side of omission rather than commission, an approach that limits our exposure to earnings disappointments. Our experience aligns with Buffett's: "Usually, the range must be so wide that no useful conclusion can be reached. Occasionally, though, even very conservative estimates about the future emergence of birds (dollars) reveal that the price quoted is startlingly low in

¹⁷ *Journal of Financial Economics* 43, 1997.

relation to value.”¹⁸ The importance of being conservative can not be overstated. An investor can often be impressed by an analysts “calculated” estimates, but he should not forget the business fundamentals that must exist to drive the numbers. In fact, Buffett is willing to wager a substantial sum on the likelihood “that fewer than 10 of the 200 most profitable companies in 2000 will attain 15% annual growth in earnings-per-share over the next 20 years.”¹⁹

In order to be sure that our predictions are conservative, we limit our purchase decisions to companies that are easy to understand. The more confidence we have in the assumptions we apply in calculating a company’s intrinsic value, the more precisely we can estimate what the company is worth. Buffett puts it this way “A fast-changing industry environment may offer the chance for huge wins, but it precludes the certainty we seek.”²⁰ Our inability to understand fast changing technology companies, for instance, has precluded our purchasing any meaningful amount of shares of stock in this sector.

A cross-section of the businesses Berkshire has part or whole ownership of should allow the reader greater insight into what types of businesses one should consider for study. An introduction to these businesses will help you identify a range of industries from which you can develop your circle of competence. Obviously, Buffett has considerable expertise in Insurance, as this is Berkshire’s primary business conducted through a number of subsidiaries, among them GEICO and General Re Corporation. Furthermore, Buffett possesses considerable expertise in a diverse number of business activities.

¹⁸ Warren Buffett, 2000 Annual Report, p. 13

¹⁹ Warren Buffett, 2000 Annual Report, p. 18.

²⁰ Warren Buffett, Chairman’s Letter, 1996 Annual Report, p. 14.

The following businesses were reported as Berkshire holdings in the Berkshire Hathaway 2001 Annual Report (All %'s are in terms the outstanding capital stock.): 11% of American Express Company, 8% of The Coca Cola Company, 9% The Gillette Company, 9% of H&R Block, 15% of Moody's Corporation, 18% of The Washington Post Company, and 3% of Wells Fargo and Company. Wholly owned subsidiaries include: Flight Safety International (provides training of aircraft and ship operators), Executive Jet (provides fractional ownership of general aviation craft), Nebraska Furniture Mart (home furniture retailer), Buffalo News (daily and Sunday newspaper publisher), See's Candies (manufacturer and seller of boxed chocolates), H.H. Brown (manufacturer and distributor of footwear), International Dairy Queen (6000 stores offering prepared dairy treats, food, and other snacks), Acme Building Brands (a manufacturer of face brick and concrete masonry products), etc.

You get the point. Buffett's circle of competence is large in scope, but the businesses that lie within it produce very tangible and understandable products. Their business models are focused. As such, their managers avoid distractions and focus on widening defensible economic moats. The TVAIC team seeks to add to its holdings, companies that we feel possess these similar types of qualifications.

Businesses that have been identified to possess certain metrics (discussed below) that are leading indicators of value merit our attention. If we discover that they are easily understood and that they offer good predictability, they are valued. If the valuation implies a large margin of safety, the company's competitors are valued. This process allows us to do a comparative analysis whereby we rank the companies according to the margin of safety each affords.

It is important to remember that companies do not operate in a vacuum. One company's gain is often another company's loss. Therefore, comparative analysis should always be applied to ensure that the purchase of the most undervalued company in the industry. Theoretically, this issue must also provide the highest rate of return of its peers. This sounds simple enough. However, due to the complexity and diversification of many businesses across several industries, identifying competitors for comparative analysis can be challenging.

As difficult as this process can be, it is critical to demonstrate patience. Keep in mind that Buffett can identify only a few "Inevitables,"²¹ even after a "lifetime of looking for them." He considers Gillette and Coca-Cola to be in this category. These easily understood businesses possess durable competitive advantages that give their products and services a "wide, sustainable moat." Thus, the intrinsic values of Gillette and Coca-Cola have to be adjusted for the value added to the concern by the fortified predictability of earnings growth provided by the company's protective moat. Likewise, our comparative analysis calculations have to be adjusted for the qualitative information that drives the financial numbers. Predictable long-term growth is a by-product of a sustainable competitive edge. Unfortunately, there are only a few Inevitables; therefore, we spend a great deal of time trying to locate and purchase the "Highly Probables."

We are firm believers in Warren Buffett's assertion that if you are a "know-something" investor concentration reduces risk and increases return: "The strategy we've adopted precludes our following standard diversification dogma. Many pundits would therefore say the strategy must be riskier than that employed by more conventional investors. We disagree. We believe that a policy of portfolio concentration may well

decrease risk if it raises, as it should, both the intensity with which an investor thinks about a business and the comfort-level he must feel about its economic characteristics before buying into it.”²²

While we take into account sector and industry prospects in our valuation, our transaction decisions are not affected by the weight of a sector in our portfolio. Rather than analyze how a transaction will affect our portfolio’s sector weightings, we believe the time is better spent analyzing how a transaction will affect our portfolio’s rate of return. Furthermore, we believe this rate of return will be substantially increased by concentration.

Thus, our top ten holdings have a substantial impact on our portfolio’s return. This strategy allows us to decrease the time spent wading through marginal transaction decisions, and increase the time spent scrutinizing major transaction decisions. We would note the insight offered by Mr. Buffett on this point: “Charlie and I decided long ago that in an investment lifetime, it’s just too hard to make hundreds of smart decisions ... Therefore, we adopted a strategy that required our being smart – and not too smart at that – only a very few times.”²³ At year end 2001 and 2000, over 70% of the total fair value of Berkshire Hathaway’s investments in equities was concentrated in four investees.

Like the Saint Bernard that searches for life in a cold and treacherous terrain, we are constantly traversing the perilous areas of the market in search for distressed companies. Once discovered, we utilize the checklist below to check for an economic pulse and sustainable vital signs. Many of our trips are in vain; we find that the company is too ill, and an attempt to cling to it might put both our lives in danger. However, there

²¹ Warren Buffett, Chairman’s Letter, 1996 Annual Report, p. 14.

²² Warren Buffett, Chairman’s Letter, 1993 Annual Report, p. 12

are a few occasions upon which we find the company is not in any real danger; rather, it is wandering alone and misunderstood. We rejoice in our discovery, for we know, unlike the Saint Bernard, our reward is far greater than doggy bones.

The terrain we traverse becomes extremely harsh when particularly inclement weather prevails in the market. We see this as an opportunity to demonstrate the courage that our training has instilled and to perform the duty our employer requires. A gyrating stock market increases the number of lost and misunderstood cases. A depressed market increases the frequency of these cases, and allows us to perform more rescues. It has been our experience that not too long after returning home, the weather clears; the sun comes out; and our rescues have substantially increased our pile of doggy bones.

How then do we know when the market has turned south? Sir John Templeton says the time to be most courageous is that point when the “gloom is so thick you can cut it with a knife.” It is at the point of maximum pessimism that we find our foremost opportunities to exploit Mr. Market. Graham explains that sometimes Mr. Market’s prices will be ridiculously high and sometimes ridiculously low. Often they will be roughly justified by the business outlook. Therefore, it is wise to form independent stock valuations, and exploit the accommodating Mr. Market when the opportunity arises:

If you are a prudent investor or a sensible businessman, will you let Mr. Market’s daily communication determine your view of the value of a \$1,000 interest in an enterprise? Only in case you agree with him, or in case you want to trade with him. You may be happy to sell out to him when he quotes you a ridiculously high price, and equally happy to buy from him when his price is low. But the rest of the time you will be wiser to form your own ideas of the value of your holdings,

²³ Warren Buffett, Chairman’s Letter, 1993 Annual Report, p. 12

based on full reports from the company about its operations and financial position.²⁴

We price securities, so we can be ready to take advantage of what Buffett refers to as an “alcoholic, manic depressive, and mentally ill” Mr. Market.

While the “Margin of Safety” principle is the cornerstone of our investment requirements, we look for a number of metrics that signal that an investment opportunity is waiting to be discovered. Most investments in our portfolio have one or more of the following investment characteristics: low stock price in relation to tangible book value, shares selling at a discount to net current assets, low price-to-earnings ratio, low corporate leverage, purchases of a company's own stock by the company's officers and directors, a stock price which has declined significantly from its previous high price, company share repurchases, small market capitalization, a high average return on equity, and/or good management. Academic research and studies (many of which are included for your study in the Appendix) have indicated a historical, statistical correlation between each of these investment characteristics and above average investment rates of return over long measurement periods.

Taking the Economic Pulse – Employing a Value Checklist

In much the same way the Saint Bernard searches for signs and smells that lead it to find lost persons, an investor should take an investigative approach to discovering the

²⁴ Benjamin Graham, Intelligent Investor, 4th ed., Harper & Row., 1973 p. 108.

clues that expose an undervalued issue. The checklist, which follows, acts as a screening tool for identifying leads²⁵:

1. Low Price in Relation to Tangible Book Value Stocks priced at less than tangible book value are purchased on the assumption that, in time, their market price will reflect at least their stated book value; i.e., what the company itself has paid for its own assets. Stocks selling at low prices in relation to tangible book value are often priced at significant discounts to the value that shareholders would receive in a sale of the entire company.²⁶

2. Stocks Selling at Discounts to Net Current Assets (i.e., cash and other assets which can be turned into cash within one year, such as accounts receivable and inventory, less all liabilities), a measure of the estimated liquidation value of the business. Net current asset value ascribes no value to a company's real estate and equipment, nor is any going concern value ascribed to prospective earning power from a company's sales base. When liquidation value appraisals are made, the estimated "haircut" on accounts receivable and inventory is often recouped or exceeded by the estimated value of a company's real estate and equipment.²⁷

This stock selection technique was successfully employed by Graham. His criterion calls for the purchase of stocks that are priced at 66% or less of a company's

²⁵ The checklist included is a combination of metrics used by the TVAIC team, the majority of which are explained in more detail in a publication produced by Tweedy, Browne Company LLC titled *What Has Worked In Investing: Studies of Investment Approaches and Characteristics Associated with Exceptional Returns*, 1992. We encourage all TVAIC members to read this study, for the academic studies of the investment characteristics explained in this booklet, which are "value" oriented characteristics, demonstrate empirical evidence for Buffett's belief that the investors who follow Graham's teachings can consistently beat the averages.

²⁶ See Roger Ibbotson Study, Appendix Table II

²⁷ See Tweedy, Browne Study, Appendix Table III

underlying current assets net of all liabilities and claims senior to a company's common stock (current liabilities, long-term debt, preferred stock, unfunded pension liabilities). For example, if a company's current assets are \$100 per share and the sum of its current liabilities, long-term debt, preferred stock, and unfunded pension liabilities is \$40 per share, then net current assets would be \$60 per share, and Graham would pay no more than 66% of \$60, or \$40, for this stock.

Graham used the net current asset investment selection technique extensively in the operations of his investment management business, Graham-Newman Corporation, through 1956. Graham reported that the average return, over a 30-year period, on diversified portfolios of net current asset stocks was about 20% per year.²⁸ Graham's commentary should highlight the logic and simplicity of this technique: "It always seemed, and still seems, ridiculously simple to say that if one can acquire a diversified group of common stocks at a price less than the applicable net current assets alone – after deducting all prior claims, and counting as zero the fixed and other assets – the results should be quite satisfactory."²⁹

3. Low Price in Relation to Earnings Stocks bought at low price earnings ratios afford higher earnings yields than stocks bought at higher ratios of price to earnings. The earnings yield is the yield that shareholders would receive if all the earnings were paid out as a dividend. Benjamin Graham recommended the purchase of securities of companies in which the earnings yield (i.e., the reciprocal of the price/earnings ratio) was at least twice the AAA bond yield, and the company's total debt (i.e., current liabilities

²⁸ *What Has Worked In Investing*, p.8.

²⁹ Benjamin Graham, *Intelligent Investor*, 4th ed., Harper & Row., 1973.

and long-term debt) was less than its book value. Graham also advised that each security which met the selection criteria be held for either two years or, or until 50% price appreciation occurred, whichever came first.³⁰

Investing in stocks that are priced low in relation to earnings does not preclude investments in companies whose earnings are expected to grow in the future. To paraphrase Warren Buffett, “value” and “growth” are joined at the hip. A company priced low in relation to earnings, whose earnings are not expected to grow, is preferable to a similarly priced company whose earnings are not expected to grow. Price is key. Included within this broad low price in relation to earnings category are high dividend yields. Stocks of companies selling at low price/earnings ratios often have above average cash dividend yields. Additionally, the remaining part of earnings after the payment of cash dividends, i.e., retained earnings, are reinvested in the business for the benefit of shareholders. Retained earnings increase the net assets, or stockholders’ equity, of a company. The increase in stockholder’s equity from retained earnings often equates to a specific increase in the true corporate value of a company, especially when the retained earnings result in a similar increase in a company’s cash or a decrease in its debt. Reinvestment of retained earnings in business assets and projects that earn high returns can increase true corporate value by amounts exceeding the actual retained earnings. A company with a low price/earnings ratio, by definition, must provide the investor with either an above average cash dividend yield, or an above average retained earnings yield, or both.

³⁰ See Henry Oppenheimer’s Study, Appendix Table IV

4. Low Corporate Leverage Our objection to debt is directly correlated to our extreme aversion to risk. Betting heavily on companies that have been punished by the market can produce significant rewards; however, a company that has taken on a burdensome debt load will be most instable during times of distress. One of the effects of a highly leveraged capital structure is to make the current market value of the company largely unpredictable. We will not knowingly purchase an issue where the debt burden could jeopardize solvency.

5. A Significant Pattern of Purchases by One or More Insiders (Officers and Directors) Officers, directors and large shareholders often buy their own company's stock when it is depressed in relation to the current value which would be ascribable to the company's assets or its ongoing business in a corporate acquisition, or to the likely value of the company in near or intermediate future. Insiders often have "insight information:" knowledge about new marketing programs, product price increases, cost cuts, increased order rates, changes in industry conditions, etc., which they believe will result in an increase in the true knowledge of "hidden assets," such as the value of a money-losing subsidiary which a competitor may have offered to buy, or knowledge of the likely earning power of the company once heavy non-recurring new product development costs stop. It is not uncommon to see significant insider buying in companies selling in the stock market at low price/earnings ratios or at low prices in relation to book value. Frequently, companies in which we have invested have also purchased their own shares in the open market.

6. Company Share Repurchases In “Beating the Market by Buying Back Stock,”³¹

Carol Loomis examined the investment returns from a strategy of buying the stock of companies that have repurchased significant amounts of their own common stock. The study screened 1,660 stocks in the Value Line Investment Survey and selected all companies that had purchased significant amounts of their own shares in the 10-year period from 1974 through 1983. (Companies that had purchased a large quantity of stock to eliminate a shareholder who had threatened a takeover were eliminated from the sample.) Investments were assumed to have been made on the approximate date of each stock repurchase. The total investment return was measured from each of these dates to the end of 1984, producing a 22.6% average compounded rate of return. The comparable return of the S&P 500 was 14.1%. Buffett offers an explanation for the results of this study:

When Coca-Cola uses retained earnings to repurchase its shares, the company increases our percentage ownership in what I regard to be the most valuable franchise in the world... Instead of repurchasing stock, Coca-Cola could pay those funds to us in dividends, which we could then use to purchase more Coke shares. That would be a less efficient scenario: Because of taxes we would pay on dividend income, we would not be able to increase our proportionate ownership to the degree that Coke can, acting for us.³²

7. A Significant Decline in a Stock's Price A decline in price is often accompanied by a decline in earnings or an earnings disappointment. Reversion to the mean is almost a law

³¹ Carol Loomis, *Fortune*, “Beating the Market by Buying Back Stock”, April 29, 1985.

³² Warren Buffett, Chairman's Letter, 1990 Annual Report, p. 4.

of nature with respect to company performance. We have found that, more often than not, *good* companies with *able management*, whose recent performance has been poor, tend to perk up and improve.

8. Small Market Capitalization Most publicly traded companies are small in terms of their market capitalization. The sheer volume of these companies precludes a great number of them from the intense scrutiny that very often keeps larger capitalized companies efficiently valued. Thus, a great number of these companies are neglected proper valuation recognition for longer periods of time.³³

9. A High Average Return On Equity (ROE) Over a Long Stretch of Time In discussing the earnings (and intrinsic value) growth prospects of a business (or of the S&P 500), Warren Buffett, Charles Munger, and Bill Ruane³⁴ have frequently mentioned the potential of a company to reinvest retained cash earnings in the company's operating business and earn high rates of return on this additional investment. A high average ROE over a long stretch of time, such as ten years, conveys information about the nature of a business and suggests that the business enjoys some kind of competitive advantage, often from lower costs, uniqueness, or differentiation, that has enabled the business to sustain high returns.³⁵

³³ See Rolf Banz's Study, Appendix Table V

³⁴ Bill Ruane was a student of Graham's, principle of the Sequoia Fund, and the only investment manager Buffett ever recommended to his partners upon dissolving Buffett Partnerships.

³⁵ Great 10-Year Record = Great Future Right?, p. 1.

10. Good Management We require management be shareholder friendly. If management has a significant stake in the business, then we feel much more comfortable about our partnership with them. Of course, there is no management as friendly as Berkshire Hathaway's. If management has a reasonable compensation package and a robust equity stake in the business chances are their interests are aligned with shareholder interest. (Munger has a 90% of his net worth tied up in Berkshire and Buffett has 99% of his.)

How to Think About Markets

At the Financial Management Association's 2002 Annual Meeting, Mr. Buffett was asked what his class would be like if he were the teacher. He responded that he would teach two concepts. First, he would teach his students how to value companies. Secondly, he would teach students how to think about markets.

Investors should take notice when the "Oracle of Omaha" becomes uncomfortable with overall market valuations. It is no small thing that Buffett was a net seller of stocks in 2000, and in each of the four years before as well. This retreat fits his well-known opinion that future returns from stocks can't begin to match those that investors earned in the 1980s and '90s.³⁶

He almost never talks publicly about stock market levels in his annual reports or speeches. Furthermore, he disdains political and economic forecasts: "Even now, Charlie and I continue to believe that short-term market forecasts are poison and should be kept locked up in a safe place, away from children and also from grown-ups who behave in

the market like children.”³⁷ He is in good company, for Gary S. Becker, Nobel Prize-winning University of Chicago economist, published a *Business Week* article prior to the 1989 recession warning “...we economists cannot predict business cycles very well.”³⁸

However, in each of the last three years Buffett has granted the public insight into his approach to thinking about the long-term yield on common stocks. Carol Loomis of *Fortune* magazine captured his thoughts in 1999 and 2001 in articles titled “Mr. Buffett on the Stock Market” and “Warren Buffett on the Stock Market,” respectively. In addition to these articles, Buffett used his 2000 Chairman’s Letter (page 14) to express his concern for the “irrational exuberance” being demonstrated in the marketplace. Each of these sources provides invaluable information on how to think about markets. Their aggregate is too lengthy to be included; however, Dr. Auxier does a masterful job distilling the major points in his “Investments Material.” I have combined his comments on the 1999 article (the majority of the text which follows) with my observations on the 2001 article.³⁹

Synopsis of “Mr. Buffett on the Stock Market”

The gist of this article (1999) is Buffett’s argument that the next 17 years’ performance in the stock market isn’t likely to be good, probably averaging only about 6% per annum. In short, the stock market is overvalued now – selling way too high...

³⁶ Carol Loomis, *Fortune*, “The Value Machine,” Feb. 19, 2001.

³⁷ Warren Buffett, Chairman’s Letter, 1992 Annual Report, p. 2.

³⁸ Gary S. Becker, *Business Week*, “How Bad Will the Downturn Be? Flip a Coin.” April 10, 1989.

Seventeen Years Ending Dec. 31, 1981. First Buffett examines the stock market's performance over the 17 years ending in Dec. 31, 1981. From Dec. 31, 1964 to Dec. 31, 1981, the market rose from **874.12** to **875.00**. In short, the market went nowhere for 17 years; it's important to understand why.

You would think that business surely must have been bad over this period for the stock market to have performed so poorly. This wasn't the case; it was Wall Street that was sick, not Main Street. GDP almost quintupled, rising by 370%. In short, business performed very well over this time frame – significantly better in fact than during the following 17 years when the market performed so well. Then why did the market perform so badly?

(1) **Interest rates.** Here is Buffett, "In economics, interest rates acts as gravity behaves in the physical world. At all times, in all markets, in all parts of the world, the tiniest change in rates changes the value of every financial asset." Interest rates on long-term government bonds rose from a little over 4% to more than 15%. This had a tremendous negative impact on both stock and bond prices. Why did interest rates climb so high?

(2) **Poor Corporate Profitability.** After-tax corporate profits as a percent of GDP generally range from 4% to 6.5%. By 1982, profits had fallen to 3.5% of GDP. The Federal Reserve was trying to break the back of inflation, and as Buffett says, Fed

³⁹ Dr. Al Auxier's summary of Carol Loomis' 1999 article, "Mr. Buffett on the Stock Market," can be read in its entirety in his "Investments Material," pages 44-47. The included commentary on this article is

Chairman Paul Volker took a two-by-four to the economy to do it. This brought on a recession and poor corporate profitability.

- (3) **Investor Psychology.** Investors have a bad habit of projecting the past into the future when they ought to know better. Here's Buffett: "And is so typical, investors projected out into the future what they were seeing. That's their unshakable habit: looking into the rear-view mirror instead of through the windshield." If you're to be successful investing, you've got to break this habit. And yet it's tough to do because often your best prediction is no change...

Seventeen Years Ending Dec. 31, 1998. From Dec. 31, 1981 to Dec. 31, 1998 the Dow went from 875 to 9,181. This 17-year period was the finest market performance in U.S. history, better even than if you had bought in the depths of the Great Depression.

Looking at the three factors determining stock market performance, we find:

- (1) **Interest rates.** Interest rates fell from more than 15% on the U.S. government long bond to 5%.

- (2) **Corporate Profitability.** Corporate profitability had increased dramatically, rising from about 3.5% of GDP to about 6.5%.

- (3) **Investor Psychology.** The greatest bull market in U.S. history had produced great euphoria among investors. According to their "unshakable habit," investors were

almost entirely taken from this work.

looking into the rear-view mirror instead of through the windshield...Buffett puts it this way: "Once a bull market gets under way, and once you reach the point where everybody has made money no matter what system he or she follows, a crowd is attracted into the game that is responding not to interest rates and profits but simply to the fact that it seems a mistake to be out of stocks. In effect, these people superimpose an I-can't-miss-the-party factor on top of fundamental factors that drive the market."

What's Necessary for Juicy Profits Over the Next Ten or 17 or 20 Years; One or more of the following must occur:

(1) "Interest Rates Must Fall Further." A fall to 3% would nearly double stock prices Buffett argues.

(2) "Corporate Profitability in Relation to GDP Must rise." Buffett doesn't think this is likely, but keep in mind that those investors who feel strongly that we're in a new economy believe that corporate earnings will grow nicely. In great stock market booms, most investors always believe that there is an important departure from the past that makes stocks worth much more. In the great bull market of the 1920s, for example, the airplane, automobile, and radio were thought to have created a new era... And of course the economy was on the dawn of a new era, but it was the Great Depression, not a new-found prosperity.

(3) You've Got to Be a Good Stock Picker. Here Buffett emphasizes how tough it was to pick the winners in the “new era” economy. For example, early in the 20th century, there were maybe 2,000 automobile manufacturers, and even though autos had a tremendous impact on the new economy, it was difficult for investors to pick the winners. And he makes a similar comparison for airplane makers, airlines, and other industries which greatly impacted the economy, but generally didn't profit investors... The important lesson Buffett draws from this: “The key to successful investing is not assessing how much an industry is going to affect society, or how much it will grow, but rather determining the competitive advantage of any given company and, above all, the durability of that advantage. The products or services that have wide, sustainable moats around them are the ones that deliver rewards to investors.”

Buffett spells out why stocks over the next ten or 17 or 20 years will probably only earn about 6% per annum on average. First, real growth in the economy will only average about 3% per annum, which Buffett says “is pretty darn good.” Since after-tax corporate profits as a percentage of GDP is at the upper range of about 6%, profits also will grow at about 3% real plus 2% inflation plus about one percent for dividend yield, or a total of 6% per annum. (Buffett says that “you have to be wildly optimistic to believe that corporate profits as a percentage of GDP can, for any sustained period, hold much above 6%.”)

Additional Thoughts Expressed in “Warren Buffett on the Stock Market”

The ideas expressed in the 2001 article parallel the thoughts explained above. There are two notable additions. First, Buffett changes his expectation for long-term returns on equities over the next decade or two from 6% to 7%. Here is an explanation of his logic: First, real growth in the economy will only average about 3% per annum, which Buffett says “is pretty darn good.” Since after-tax corporate profits as a percentage of GDP is at the upper range of about 6%, profits also will grow at about 3% real plus about 2% inflation plus about one percent for dividend yield, or a total of 6% per annum. Since the 1999 article was published, the economy grew as valuations fell; therefore, Buffett revised his estimate upward to 7%.

Secondly, he provides a method for quantifying, tracking, and interpreting the factors that determine long-run market performance. He does this by introducing a chart that shows the market value of all publicly traded securities as a percentage of the country’s business – that is, as a percentage of GNP – which he cites as “the best single measure of where valuations stand at any given moment.”

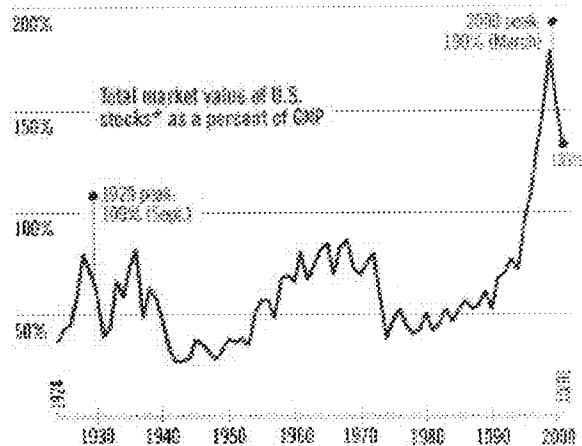
Buffett’s explanation of the chart included below follows:

For investors to gain wealth at a rate that exceeds the growth of U.S. businesses, the percentage relationship line on the chart must keep going up and up. If GNP is going to grow 5% a year and you want market values to go up 10%, then you need to have the line go straight off the top of the chart. That won’t happen.

For me, the message of that chart is this: If the percentage relationship falls to the 70% or 80% area, buying the stocks is likely to work very well for you. If the ratio approaches 200% -- as it did in 1999 and part of 2000 -- you are playing with fire. As you can see the ratio was recently 133%.⁴⁰

The market has been a wild thing

The value of U.S. stocks vs. GNP has avalanched since 2000. But October's ratio of 133% still tops the 1929 peak.



The thought process illustrated in these articles allows an investor a quantifiable approach for interpreting the long-term impact of economic data. Keep in mind, these ideas will not allow you or Buffett to make predictions about what the stock market will do in the short-run: "I never have the faintest idea what the stock market is going to do in the next six months, or the next year, or the next two."⁴¹ However, an understanding of the key principals that control and direct the movement of the market will allow you to have good predictability of what is likely to happen over the long term: "But I think it is

⁴⁰ The chart and its explanation are taken from Carol Loomis, *Fortune*, "Warren Buffett on the Stock Market," December 10, 2001, p. 10.

⁴¹ Carol Loomis, *Fortune*, "Warren Buffett on the Stock Market," December 10, 2001, p. 7.

very easy to see what is likely to happen over the long term.”⁴² An enterprising student of investments will read the above texts entirely, for they quite literally will pay dividends.

A Note on How to Think About Market Fluctuations

The above discussion of three seventeen year periods beginning December 31, 1964 demonstrated the inevitability of stock market fluctuations. Therefore, it is important for investors to be mentally prepared for fluctuations by adopting a logical mindset. Preparation prevents panic. Buffett illustrates the logic exquisitely:

A short quiz: If you plan to eat hamburgers throughout your life and are not a cattle producer, should you wish for higher or lower prices for beef? Likewise, if you are going to buy a car from time to time but are not an auto manufacturer, should you prefer higher or lower car prices? These questions, of course, answer themselves.

But now for the final exam: If you expect to be a net saver during the next five years, should you hope for a higher or lower stock market during that period?

We plan to be net buyers of equities for many years to come. Therefore, according to the logic prescribed above, we rejoice when the prices for “hamburgers” fall. We look forward to “29 cent Tuesday,” for we know that Wednesday McDonalds will be selling

⁴² Carol Loomis, *Fortune*, “Warren Buffett on the Stock Market,” December 10, 2001, p. 7

the same hamburger for 89 cents. Either way, we have to eat. We choose to stock up on Tuesdays.

A Note on the Importance of Patience in an Overvalued Market

Buffett reminds us that you are just waiting for the “fat pitch,” the “no-brainer.” The difference between being an investor in the batter’s box and being a baseball player is that if you pass up three strikes you are not called out:

Under the circumstances, we try to exert a Ted Williams kind of discipline. In his book *The Science of Hitting*, Ted explains that he carved the strike zone into 77 cells, each the size of a baseball. Swinging only at balls in his “best” cell, he knew, would allow him to bat .400; reaching for balls in his “worst” spot, the low outside corner of the strike zone, would reduce him to .230. In other words, waiting for the fat pitch would mean a trip to the Hall of Fame; swinging indiscriminately would mean a ticket to the minors.⁴³

It is difficult and boring to stand in the batter’s box for an extended period of time without swinging. However, a “good eye” is as rewarding as a powerful swing. The TVAIC rules dictating we be 95% invested can make this policy difficult to follow; however, our homerun swings, those of concentration, are limited to “fat pitches.”

A Note on Financial Jargon, Annual Reports, and Evaluating Management

⁴³ Warren Buffett, Chairman’s Letter, 1997 Annual Report, p. 3.

During my summer interning in Equity Research at Bear Stearns (New York office), I was inundated with nebulous terms like “Net, Net” and “restructuring.” Learning to speak Wall Street was the equivalent of mastering a new language. Naturally, I sought counsel on terms such as these from an Analyst who had earned my confidence and respect. Joe Yurman, a veteran on Wall Street, is a former trader who gave up the action of the trading floor for the precision of research. Despite the move, he retained the lessons and the “tell it like it is” attitude he acquired during his years on the trading floor. His advice reveals much about Wall Street jargon: “Clifford, to understand a company you have to listen to everything management tells you...to value a company, you must hear what management did not tell you.”

Fortunately, Buffett does not attempt to speak Wall Street, although he could undoubtedly teach a course on it. Rather, he chooses to explain his decisions in the language of Joe Public. This is fitting, of course, for shareholder friendly managements to do, for most shareholders are of the Joe Public type. Thus, corporate managements and the Analysts that follow them would better serve investors if they heeded Larry Bird’s assertion that: “A good pass is caught pass.”

Fancy jargon will remain an obstacle for investors, for such terms allow the author wiggle room. At the 2002 FMA meeting with Mr. Buffett, he explained that he skims hundreds and hundreds of annual reports a year. This exercise is beneficial in a number of ways. Among them is that by so doing, Buffett has acquired a skill for gaining insight into the “unquantifiable” component of a company: management.

Perhaps, the evaluation of management is Buffett’s greatest point of departure from the Graham philosophy. Graham states that “Until objective, quantifiable, and

reasonably reliable tests of managerial competence are devised and applied, this factor will continue to be looked at through a fog.”⁴⁴ In contrast, Buffett asserts that having read an incalculable number of annual reports, he has acquired a skill for identifying managements that have let the Public Relations department have the final say.

Why, do we include this point? First, you should consider the benefits of skimming the annual reports, especially the “Letter to Shareholder’s” section, of companies that you wish to include in your circle of competence. This practice will allow you to add to what Buffett describes as a “cumulative databank” that you can call on for a lifetime of investment decisions. As your databank becomes more cumulative, you will become more astute at identifying honest and competent management.

Secondly, you are bound to be asked about the TVAIC strategy by a reporter, interviewer, etc. In order to respond intelligently you will undoubtedly have to address preconceived notions about the terms “Growth” and “Value” in investing. That is, you will have to overcome the temptation to mislead by invoking financial jargon.

Buffett explains that value and growth are not mutually exclusive terms: “In our opinion the two approaches are joined at the hip: Growth is *always* a component in the calculation of value, constituting a variable whose importance can range from negligible to enormous and whose impact can be negative as well as positive.”⁴⁵

You should be aware that our fund is labeled a “value-fund” due to the metrics associated with our investment decisions. However, this distinction is a bit redundant, for as Buffett notes: “What is ‘investing’ if it is not the act of seeking value at least sufficient to justify the amount paid? Consciously paying more for a stock than its calculated value

⁴⁴ Benjamin Graham, Intelligent Investor, 4th ed., Harper & Row., 1973 p. 155.

⁴⁵ Warren Buffett, Chairman’s Letter, 1992 Annual Report, p. 11.

– in hope that it can soon be sold for a still higher price – should be labeled speculation...”⁴⁶ Investing is best when it is simple. Therefore the best investment ideas can be explained very simply. According to Buffett, the best investment ideas can be explained in a paragraph.

Thus, it is important that whenever possible you should opt to avoid financial jargon, electing instead to explain ideas in the language of Joe Public. Finding clear and concise terms for presenting an idea is a rewarding endeavor. A streamlined presentation exposes flawed thinking and magnifies the crucial decision factors.

Implementation

So, now you have been introduced to our investment philosophy. It seems simple enough right? Well, it did until you put the guideline down and tried to find a stock that possessed the qualities outlined above.

I can remember reading Buffett for the first time; I came out of class fired up to find that undervalued stock and exploit it. I went barreling through *Yahoo Finance* searching for the characteristics listed above. After several hours of dead ends, I became frustrated and turned back to my Buffett guidebook where I was reminded of Charlie Munger’s assertion that he and Buffett come up with big investment ideas once every three years.

The ideas will come. However, the “fat pitches” are few, and you must be prepared to exploit these opportunities when they do arise. Therefore, just as an athlete

⁴⁶ Warren Buffett, Chairman’s Letter, 1992 Annual Report, p. 11.

prepares for the next game, you too must adopt a daily routine that will allow you to perform when called upon. Buffett describes the information he absorbs as registering in a “cumulative databank.” Maintaining and expanding this databank ensure that your mind will be ready when that great investment idea comes across the plate.

Many students waste a considerable amount of time trying to identify where to acquire information. Once they do find the information source, they often have a great deal of trouble deciding what is and is not important. Finding and sorting out the important information becomes easier with experience; however, the sources described below should help you develop a daily routine for developing a search process for undervalued issues.

Locating Value in the Market

“So many publications, so little time.” The demands of college life can be rigorous, and no one expects you to forego a balanced college experience to research companies all the time. Therefore, it is important that, when you do elect to spend your valuable time exploring investment ideas, you maximize the time spent.

Investment ideas can be generated a number of ways, but you will increase your productivity by implementing an idea screen. An effective screen should allow you to sift through the entire market quickly. The screen should identify companies that deserve a closer look (i.e. companies possessing the characteristics described earlier). Like a pioneer searching for gold, more often than not your screen will catch nothing but rocks. However, consistent screening pays off. Occasionally, you will expose a gold nugget.

The “Market Data” segment of the *Wall Street Journal Online* is an excellent screening tool. You should make it your routine after the market closes each day to print off the sections in the Market Data segment entitled “Losers-Top 100,” “NYSE Highs/Lows,” and “AMEX Highs/Lows.” The themes of these sections align with our belief in finding value where the gloom is thickest. Dipping this screen into the market will fill your strainer with mud covered rocks. Washing away the mud by checking for the metrics described above will reveal that a few of those mud covered rocks are not rocks at all. Extensive valuation and research of such discoveries pays off, for sometimes such prospecting reveals a precious gem.

Two other useful sections can be found in the Market Data Segment. First, the Insider Trading Spotlight has weekly updates on pertinent information on insider sales and purchases such as lists of the industries where insiders have been the most active buyers and sellers of stock. Secondly, the Short Interest Highlights section is a good indicator of where pessimism can be found in the market. Visiting these sections once a week can be productive.

There is no substitute, of course, for reading. Buffett reveals a great truth about investment ideas: “Good investment ideas are rare, valuable and subject to competitive appropriation just as good product or business acquisitions are.”⁴⁷ The more you read, the more exposure you will have to other people’s ideas. It is helpful though, to be reading the right people’s ideas.

The Wall Street Journal offers fine insight into the market. It should be understood that a daily dose of this publication will greatly enhance your understanding of investing and idea generating productivity. Setting aside some time on the weekend to

explore *Barron's* will give you a head-start on the news and ideas you can expect to be covered the following week in the *WSJ*. Finally, take it from Buffett that there is no better source for investment insight than the *Outstanding Investor Digest*: "I'd advise you to subscribe. I read each issue religiously. Anyone interested in investing who doesn't subscribe is making a big mistake."⁴⁸ This publication is excellent.

Lastly, the resourceful investor will implement a screen that will allow him to track the ideas and investments of a group he believes to be among the most astute investors. By generating a list of the most successful investors, and tracking their moves, he will be able to identify overlapping investments and themes. After all, it is just common sense to study success.

This last screen is much more subjective than the screen described above. Furthermore, it takes some time to identify the investors that should be included among the group to be watched. Unfortunately, many investors worthy of inclusion are quite secretive about their investments; therefore, destroying any chance of tracking their movements. However, the investor that is willing to build out such a model and consistently cross-reference various ideas will benefit greatly over an investment lifetime.

Confirming You Have Found Value

It is beneficial to do an initial valuation (described below) to determine that a substantial enough margin of safety exists to merit the time and attention further research will require. If, in fact, symptoms emblematic of an undervalued issue are discovered,

⁴⁷ Warren Buffett, 2001 Annual Report, p. 66.

⁴⁸ *Outstanding Investor Digest* Homepage, Testimonial Section.

you should carry forward with your analysis. This process requires that you explore primary (SEC Filings including 10-Ks and 10-Qs, Annual Reports, and Conference Calls) and secondary information (Computer Databases, Research Reports, and Financial Information Services).

At this stage you are trying to gather the facts. For a given company there will inevitably be many stories, proponents, and critics. You must listen to the noise, but hear the facts. This difficult task necessitates that you proceed systematically so as to avoid attractive but distracting fantasy scenarios and projections touted by those with a vested interest in influencing your research.

Familiarize yourself with the audited financial statements presented in the company's SEC filings. These can be downloaded for free from any financial service (i.e. *Yahoo Finance*). The information contained within these filings ideally should be used for all of your quantitative financial statement analysis including calculating financial ratios and intrinsic value. Using dependable secondary sources for collecting this data (i.e. *S&P Reports*, *Value Line Reports*), however, saves a great deal of time. The latter method is reasonably reliable, but should not preclude the investor from being familiar enough with primary information to recognize glaring incongruities.

Having familiarized yourself with the company's financial condition via financial statement analysis, you are now ready to proceed to an analysis of the qualitative information affecting the company. Qualitative analysis requires assessing subjective considerations such as management, competitive advantage, industry dynamics, demographics, etc. These considerations often reveal advantages or disadvantages of the company previously unconsidered in the original intrinsic value calculation. Thus, the

intrinsic value must be adjusted to include these considerations (For example, upon discovering that a company has exposure to asbestos liability that would materially affect the company, an investor should make an adjustment to his assumptions about future earnings and/or the discount rate employed to account for the newly discovered risk.).

Your final intrinsic value calculation will allow you to determine whether the company under consideration possesses a healthy enough margin of safety to be considered a buy. If it is determined that, despite using conservative figures, a substantial margin of safety does exist then you should present your analysis and recommendation to the group.

Valuation

The calculation of intrinsic value is not simple, for as Buffett explains, “intrinsic value is an estimate rather than a precise figure, and it is additionally an estimate that must be changed if interest rates move or forecasts of future cash flows are revised. Two people looking at the same set of facts, moreover... will almost inevitably come up with at least slightly different intrinsic value figures.”⁴⁹ Students often find the idea of calculating a company’s intrinsic value to be foreign and, therefore, intimidating. However, Buffett explains the idea in a simple analogy that is helpful for relating the valuation process:

The oracle was Aesop, and his enduring, though somewhat incomplete, investment insight was “a bird in the hand is worth two in the bush.” To flesh out

this principle, you must answer only three questions. How certain are you that there are birds in the bush? When will they emerge and how many will there be? What is the risk-free interest rate (which we consider to be the yield on long-term U.S. bonds)? If you can answer these three questions, you will know the maximum value of the bush—and the maximum number of the birds you now possess that should be offered for it. And, of course, don't literally think birds. Think dollars.⁵⁰

When calculating intrinsic value you act as a scale. Your job is to weigh the facts and determine the number where the needle will rest. Not all scales are calibrated the same, nor do they weigh all the facts. In fact, Graham pointed out that in the short-run the market uses a voting machine where fear and greed are the most important factors. These should not register on a fact weighing scale. Buffett is fond of saying that if you put garbage into even the most intricate and precise financial model you will get garbage out the other end. Therefore, a simple valuation model that calls for conservative assumptions produces a dependable and reasonable intrinsic value calculation. Below is a presentation of the standard model employed by the TVAIC:

CLAYTON HOMES VALUATION – JUNE 28, 2000 (Recent price is \$8 per share)
Al Auxier

ASSUMPTIONS:

- (1) Clayton earns \$1.03 a share for the fiscal year ending June 30, 2000. (A \$1.03 EPS is the analysts' current consensus estimate.)
- (2) Both earnings and dividends (currently at \$.06 per share) grow at a 15% per annum rate for the next five years. In five years, the price/earnings ratio will be 10X. (The analysts' consensus estimate of earnings growth for the next five years is 18% per annum. If earnings grow at 15% per annum, chances are that it will

⁴⁹ Warren Buffett, *An Owners Manual*, January 1999, p. 7.

⁵⁰ Warren Buffett, 2000 Annual Report, p. 13.

- sell for more than 10 times earnings. In short, I'm being conservative. Its historical average P/E is about 15 or 16 times.)
- (3) An appropriate discount rate for this stock is 12%. (Again this is conservative. Almost no one employs so high a discount rate for good companies.)
- (4) You hold the stock five years and then sell. (I also ignore taxes.)

WHAT IS THIS STOCK WORTH?

$$\begin{aligned} PRICE_5 &= 10X[\$1.03X(1.15)^5] \\ &= \$20.71 \end{aligned}$$

$$\begin{aligned} PV_DIV &= \$0.06X1.15X \left[\frac{1 - \left(\frac{1.15}{1.12} \right)^5}{.12 - .15} \right] \\ &= \$0.32 \end{aligned}$$

$$\begin{aligned} PV_PRICE_5 &= \frac{\$20.71}{(1.12)^5} \\ &= \$11.75 \end{aligned}$$

The stock's worth now (its intrinsic value) equals:

$$\begin{aligned} INTRINSIC_VALUE &= PV_PRICE_5 + PV_DIV \\ &= \$11.75 + \$0.32 \\ &= \$12.07 \end{aligned}$$

Conservatively valued, Clayton is worth \$12.07, and since it is selling for \$8, it has a **margin of safety** of about 50%. That is, the stock's worth about 50% more than its current selling price.

WHAT IS THIS STOCK'S EXPECTED RATE OF RETURN FOR THE FIVE-YEAR HOLDING PERIOD?

$$\begin{aligned} EXPECTED_RETURN &= RETURN_FROM_CAPITAL_APPRECIATION + CURRE \\ &\quad DIVIDEND_RETURN \\ &= 100 \left[\left(\frac{PRICE_5}{PRICE_0} \right)^{\frac{1}{n}} - 1 \right] + 100 \left(\frac{DIV}{PRICE_0} \right) \\ &= 100 \left[\left(\frac{\$20.71}{\$8} \right)^{\frac{1}{5}} - 1 \right] + 100 \left(\frac{\$.06}{\$8} \right) \\ &= 21.7\%_per_annum \end{aligned}$$

RISK CONSIDERED: Manufactured housing – Clayton’s industry -- is riskier than many industries, and an investor must carefully consider whether this risk is acceptable.

**A SIMPLE STOCK VALUATION ILLUSTRATION
USING CLAYTON HOMES AS AN EXAMPLE**

January 17, 2001

Clayton Homes (symbol CMH) was selling for \$14 1/16 per share today, its current P/E ratio is 15.29, and its 5-year average P/E is 13.6. Among the analysts following the stock, the high EPS estimate for fiscal year 2002 (ends June 30, 2002) is \$.99 per share, and the analysts' estimated 5-year earnings growth rate is 14% per annum. The stock is paying a \$.06 dividend per share. If you bought this stock today for \$14 1/16 a share, what is your expected rate-of-return per annum for a 5-year holding period? What is this stock's intrinsic value?

For your Clayton valuation, use the 13.6X P/E ratio figure, and use a 12% discount rate to calculate the intrinsic value.

ANSWERS: Expected rate-of-return = 13.67%; Intrinsic value = \$15.14

A Note on “Look Through” Earnings

Due to GAAP accounting rules the retained operating earnings of subsidiary companies are not included in operating earnings reported in SEC filings. Therefore, a company’s reported earnings have to be adjusted for retained operating earnings in investees that are not reported in profits. The formula Buffett uses follows:

- (1) Operating Earnings Reported In The SEC filing
- (2) + The Retained Operating Earnings Of Major Investees
- (3) – An Allowance For The Tax That Would Be Paid By The Company Had The
Above Earnings Been Distributed 51
- (4) Look Through Earnings

The importance of calculating “Look Through” earnings should not be overlooked. This process forces you to consider long-term business prospects. Thus, you will avoid the popular approach of focusing on the short-term.

⁵¹ Warren Buffett, 1994 Annual Report, p.11.

Graham taught that investing is best when it is most business like. By focusing on the long-term, you can approach your investments as the CEO of a company would. Your job is to allocate capital to projects that will increase the earnings of your company (the underlying earnings of the portfolio). In the long-run securities prices are reflective of earnings: “It’s true, of course, that, in the long run, the scoreboard for investment decisions is market price. But prices will be determined by future earnings. In investing, just as in baseball, to put runs on the scoreboard one must watch the playing field, not the scoreboard.”⁵²

Learning to Invest by Investing

The TVAIC program was founded on the idea that the best way to learn about investing is by making actual investments with real money. Just as students studying a foreign language learn much quicker from complete immersion, students of investments benefit immensely from hands on investment experience. Employing knowledge in a real-world capacity requires more than a “multiple-choice” understanding. Having been presented with our investment philosophy and the screening and valuation tools necessary for implementation, you are now prepared to develop your investment skills. The case examples that follow should serve as a guide for tying all of the above together.

Case Studies

AmeriCredit Corporation (ACF)

⁵² Warren Buffett, 1991 Annual Report, p. 4.

Company Overview

AmeriCredit Corp. has been operating in the automobile finance business since September 1992. Through its branch network, the Company purchases auto finance contracts without recourse from franchised and select independent automobile dealerships and makes loans directly to consumers buying late model used and new vehicles. ACF targets consumers who are typically unable to obtain financing from traditional sources. Funding for the Company's auto lending activities is obtained primarily through the sale of loans in securitization transactions. The Company services its automobile lending portfolio at regional centers using automated loan servicing and collection systems. ACF's typical borrowers have experienced prior credit difficulties or have limited credit histories.

Locating Value in the Market – ACF gets caught in our screen

Beginning in August of 2001 ACF began a steady decline from its all time high of over \$64 to a two year low of \$14 in November of 2001. Consistent employment of our Market Data Screen allowed us to identify this opportunity. First, we noticed ACF's repeated appearance in our daily review of the Market's 100 Biggest Losers. ACF's decline was also noted by other investors, resulting in an increase in ACF shares being sold short. Therefore, our Short Interest screen indicated that pessimism was starting to take its discounting effect on ACF's price tag. Mounting Pessimism could also be

observed in negative news coverage from a myriad of financial media. Finally, our interest peeked in November of 2001 when ACF showed up on our NYSE Highs/Lows screen.

Employing the Value Checklist

The scenario described above is not uncommon. Hundreds of companies each year fall out of favor with the market and experience the punishing effects of market pessimism. Thus, they too would be caught in our screen. We do not support a blind contrarian approach. Keep in mind that the gold nuggets are rare. Most of the companies that get caught in our strainer are just rocks. We throw the rocks back.

How do we distinguish the rocks from the gold nuggets? We employ our value checklist. The checklist serves as a scrub brush. The metrics that make up its bristles wash away the mud and give us a clear view of the stone we are considering.

After scrubbing ACF we were pleased with what was hidden under the pessimism. At its low of \$14 dollars per share ACF was selling at 1.1 times Tangible Book Value of \$12.71. 2001 Earnings Per Share of \$2.66 and the consensus 2002 estimate of \$3.74 implied a Price to Earnings multiple of 5 times and 4 times, respectively. We considered a Debt to Equity ratio of 2.2 times to be reasonable. In just four months ACF's share price had dropped 78%. Finally, a five year Average Return on Equity of 21.64% suggested the company possessed some kind of competitive advantage. All of these signs combined with favorable research on management merited a closer look.

Taking a Closer Look

If after employing our checklist the clues suggest that a stone may have some hidden value, we will increase the magnification of our analysis. While touring Borsheims, Buffett's Jewelry operation, members of the Financial Management Association learned that a good jeweler's lupe, with magnification capabilities of 30 to 50 times, is an essential tool in intelligent jewelry purchasing. Likewise, research of similar magnification separates precious investments from costume jewelry.

Qualitative Analysis

During the timeframe of our analysis the economists were issuing consensus declarations that the U.S. economy was, in fact, in a recession. Secondly, the market was under attack by what has been dubbed "Enronitis," an epidemic that crippled any company with unclear accounting items. A slowing economy would have a negative impact on automobile purchases, decreasing loan originations, and increasing loan defaults. This last consideration is magnified in ACF's case, for its loan portfolio consists of sub-prime credit risks. ACF is focused on purchasing, securitizing, and servicing automobile loans. Lacking a diversified revenue stream to protect it against the deteriorating economic environment, the investment community considered ACF's short-term prospects to be very unfavorable. Investor's focus on the short-term coupled with

accounting concerns about the subjectivity of calculating the loan loss allowance account were enough to cause ACF to fall out of favor.

In short, Mr. Market was looking to sell, and sell fast. It is logical to assume that a developed economy experiencing a recessionary period will recover in a reasonable amount of time. By reasonable, we mean within five years. Buffett suggests that “if you are not willing to own a stock for ten years, you should not hold it for ten minutes.”

Therefore, we considered a recovery to be a logical assumption to take into consideration of our valuation of ACF. The recovery would have the exact opposite impact of the recession: car loan demand would increase; credit losses would diminish; and concerns about loan loss allowances would disappear. Investors would undoubtedly see ACF’s focused revenue stream as well positioned for growth. As earnings grow and pessimism shifts to optimism, per share market value will benefit from multiple expansion. Furthermore, ACF’s already dominant market position would likely be enhanced by the tendency of smaller players to be driven out of business during times of a weak economy.

Of course, when valuing a financial company you must consider the effects of interest rates. We considered the positive interest rate environment in existence during the time of our valuation to create a countering effect to any increased expense that might result from rising loan defaults. Thus, the increase in expenses from loan defaults would be favorably offset by wider net interest margins due to lower fund costs. This scenario, of course, will reverse as interest rates climb, as they might do if a recovery seems to be proceeding too rapidly. Therefore, after purchasing ACF we would monitor the interest rate environment and its impact on cost of funds.

Intrinsic Valuation Calculation

Assumptions:

- (1) We used the 2001 earnings per share figure of \$2.66.
- (2) Analyst Consensus Estimates of a 25% growth rate over the next five years is dependent on geographic expansion, new branch openings, market share gains, and strategic alliances. Given the deteriorating economic environment we used a more conservative 20% growth rate in our calculation.
- (3) We used a forward price/earnings ratio of 12X. If earnings grow at 20% chances are that it will sell more than 12X earnings. Its historical P/E is about 15 or 16 times.
- (4) An appropriate discount rate for this stock is 15%. (Again this is conservative. Almost no one employs so high a discount rate for good companies.)
- (5) You hold the stock for five years and sell. (We also ignore taxes)

What is this Stock Worth?

$$\begin{aligned}\text{Price in Five Years} &= 12X[\$2.66X(1.20)^5] \\ &= \$79.43\end{aligned}$$

$$\begin{aligned}\text{PV_Price in Five Years} &= \frac{\$79.43}{(1.15)^5} \\ &= \$39.49\end{aligned}$$

The stock's worth now (its intrinsic value) equals:

$$\begin{aligned}\text{Intrinsic Value} &= \text{PV_Price in Five Years} + \text{Present Value of Dividend} \\ &= \$39.49 + \$0^* \\ &= \$39.49\end{aligned}$$

*ACF pays no dividend

Conservatively valued ACF is worth \$39.49 per share. At its low of \$14 per share it had a margin of safety of 182%. Unfortunately, by the time we completed our analysis the share price had increased to \$21.33. Despite this large adjustment, an 85% margin of safety still existed.

What is the Stock's Expected Rate of Return for the Five-Year Holding Period?

$$\begin{aligned}\text{Expected Return} &= \text{Return From Capital Appreciation} + \text{Current Dividend Return} \\ &= 100[(\text{Price in Five Years}/\text{Current Price})^{(1/5)} - 1] + 100(\text{Div}/\text{Cur Pr}) \\ &= 100[(\$79.43/\$21.33)^{(1/5)} - 1] + 100(0/0) \\ &= 30.08\% \text{ per annum}\end{aligned}$$

The Purchase Decision

The final question: Is this company and our valuation consistent with our investment philosophy? Our intrinsic valuation uses conservative assumptions and reveals a substantial margin of safety exists at the current share price. We have good predictability because the company is simple and focused. We have and do own a number of financial companies; therefore, we have some experience with the industry. Thus, we are within our circle of competence. Finally, the existence of extreme pessimism is consistent with our theory of maximum pessimism. It is time to swing the bat: “Similarly, in the world of securities, courage becomes the supreme virtue *after* adequate knowledge and a tested judgment are at hand.”⁵³

The Rest of the Story

We chose to concentrate in ACF purchasing 440 shares at \$22.05 per share on January 14, 2002. At the market’s close on April 25, 2002 shares of ACF were trading at \$44 per share, a 99% gain in four months.

Anheuser-Busch (BUD)

Company Overview

Anheuser-Busch Companies Inc. is the holding company parent of Anheuser-Busch Inc. (ABI). In addition to ABI, which is the world's largest brewer of beer, the Company is the parent corporation to a number of subsidiaries that conduct various other business operations. The Company's operations are comprised of the following business segments: domestic beer, international beer, packaging, entertainment and other.

Locating Value in the Market – BUD gets caught in our screen

During a three week stretch in September of 2001, BUD declines sharply from over \$44 per share to \$39 per share. Consistent employment of our Market Data Screen allowed us to identify this opportunity. We noticed BUD's repeated appearance in our daily review of the Market's 100 Biggest Losers. At \$39 dollars BUD was selling near a 52-week low; therefore, we probed the issue for value.

Employing the Value Checklist

After probing BUD our interest increased. At its low of \$39 dollars per share BUD was selling at a Price to Earnings multiple of 20 times and 18 times, respective of 2001 Earnings Per Share of \$1.89 and the consensus 2002 estimate of \$2.14. At these multiples BUD's Price to Earnings ratio was at a discount to the S&P multiple of 23. BUD's impressive Return on Equity increased in lockstep over the last ten years from

⁵³ Benjamin Graham, Intelligent Investor, 4th ed., Harper & Row., 1973 p. 287.

22.2% to 38.6%. BUD had also announced a share repurchase plan that would benefit earnings per share going forward. Finally, Management is the best in the industry.

Qualitative Analysis

During the timeframe of our analysis the world was fraught with uncertainty. The economy was reeling from a recession, although there were still some who would not admit that we were in fact in a recession. Magnifying this scenario was the terror that manifested itself on September eleventh. The world had suddenly become a scary place, and the market would reflect this. Therefore, we decided to look for investment opportunities in “defensive” companies.

When times get tight, companies that have large economies of scale and effective cost controls can absorb pricing pressures and maintain earnings growth while increasing market share. As the largest brewer in the world BUD was a logical play given the market forces at work. Furthermore, BUD possesses a huge advantage through its various subsidiaries that include can manufacturing, metalized paper printing, and barley malting. These operations help insulate earnings from rising packaging and ingredient costs. Finally, BUD’s twelve brewery distribution system, strategically located across the U.S., is by far and away the most progressive and economical system. Thus, cost cutting could offset any threat pricing pressure might pose.

We considered industry pricing pressure to be a short-term concern. Industry demographics are extremely favorable as the next decade will have strong growth in the 21 to 27 year old population. Furthermore, increasing wealth across the world has

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We considered industry pricing pressure to be a short-term concern. Industry demographics are extremely favorable as the next decade will have strong growth in the 21 to 27 year old population. Furthermore, increasing wealth across the world has

substantially increased the disposable income available for leisure activities. Therefore, a return to more normal operating conditions in the future should allow BUD to price its products aggressively and reduce its discounts to retailers. This coupled with the margin expansion from cost cutting could result in upward earnings adjustments.

In fact, we welcomed short-term industry pricing pressure. Our logic was that as discretionary spending started to affect people's consumption choices, BUD was well positioned to capture market share from the other premium and import producers. Looking to save a little, we reasoned that traditional premium and import drinkers would find BUD's attractively priced premium and secondary lines an appealing substitute. Secondly, traditional drinkers of BUD's premium lines would not be lost, but would most likely take advantage of the myriad of lesser expensive options BUD offers. BUD has an enormous competitive advantage in the diversity and quality of its product and the loyalty of its customers.

BUD's stable of Brands is impressive: Budweiser, Bud Light, Bud Dry, Bud Ice, Michelob, Michelob Light, Michelob Dry, Michelob Golden Draft, Busch, Busch Light, Natural Light, Natural Pilsner, King Cobra, Red Wolf, and non-alcoholic malt beverages O'Doul's and Busch NA. During 1997, the company introduced the following brands: Hurricane Ice, Catalina Blonde, Michelob Honey Lager, Michelob Maple Brown, Michelob Pale Ale, Michelob Porter, Michelob Spiced Ale, and Tequila.

Despite being in existence since 1875, BUD continues to find ways to grow. Innovative new product offerings such as Tequila in 1998 and the introduction of the new Bacardi Silver malt beverage product in 2001 complement the strong growth from increased sales of Bud Light. This new product represents a group of malternatives that

have expanded the traditional market by 3% mainly to a new female customer base. Finally, BUD was making all the right moves for the next big development in the industry, international competition. BUD holds a 50.2% direct and indirect interest in Modelo (Mexico's largest brewer) and its operating subsidiary, Diblo. BUD also owns an 18.5% position in Cerveccias Unidas S.A., the leading brewer in Chile, holding a 90% market share.

A final unquantifiable aspect of BUD is its veteran Management. Sixty-four year old chairman August Busch III is joined by a host of far and away the best managers in the industry. Their track record of 16% earnings growth and an average Return on Equity of 28.12% over the last decade are extraordinary in a mature company in an established industry. We considered BUD's divesting of its various non-beer operations to be an encouraging sign of management's renewed focus on its core products and growth. Finally, the Busch family is still closely involved with and heavily invested in the daily operations of BUD. We were encouraged that management's interests were aligned with shareholder's interest, and viewed favorably a partnership with the Busch family.

Intrinsic Valuation Calculation

Assumptions:

- (1) We used the 2002 consensus earnings per share figure of \$2.14.
- (2) Both Earnings and dividends (currently at \$.69 per share) grow at an 11% per annum rate for the next five years. In five years, the price to earnings ratio will be 21X.
- (3) An appropriate discount rate for this stock is 10%.
- (4) You hold the stock for five years and sell. (We also ignore taxes)

What is this Stock Worth?

$$\begin{aligned}\text{Price in Five Years} &= 21X[\$1.89X(1.11)^5] \\ &= \$75.73\end{aligned}$$

$$\begin{aligned} PV_Div &= \$.69 \times 1.11 \times [(1 - (1.11/1.1)^5) / (.1 - .11)] \\ &= \$3.55 \end{aligned}$$

$$\begin{aligned} PV_Price \text{ in Five Years} &= \frac{\$75.73}{(1.1)^5} \\ &= \$47.02 \end{aligned}$$

The stock's worth now (its intrinsic value) equals:

$$\begin{aligned} \text{Intrinsic Value} &= PV_Price \text{ in Five Years} + \text{Present Value of Dividend} \\ &= \$47.02 + \$3.55 \\ &= \$50.57 \end{aligned}$$

Conservatively valued BUD is worth \$50.57 per share. At its low of \$39 per share it had a margin of safety of 30%. Unfortunately, by the time we completed our analysis the share price had increased to \$41.43. Despite this adjustment, a 22.05% margin of safety still existed.

What is the Stock's Expected Rate of Return for the Five-Year Holding Period?

$$\begin{aligned} \text{Expected Return} &= \text{Return From Capital Appreciation} + \text{Current Dividend Return} \\ &= 100[(\text{Price in Five Years} / \text{Current Price})^{(1/5)} - 1] + 100(\text{Div} / \text{Cur Pr}) \\ &= 100[(\$75.73 / \$41.43)^{(1/5)} - 1] + 100(.69 / 41.43) \\ &= 14.5\% \text{ per annum} \end{aligned}$$

The Purchase Decision

The final question: Is this company and our valuation consistent with our investment philosophy? Buffett believes in buying stock only when the stock has a nice margin of safety. The 22.05% margin of safety suggested by our valuation is not substantial. However, Buffett suggests that he would rather "buy a good business at a fair price than a fair business at a good price." BUD is an outstanding business with favorable economics and excellent management. Furthermore, it has a defensible moat in its economies of scale and brand loyalty.

The comfort level we felt with the predictability of BUD's performance and our assumptions was an unquantifiable component of our intrinsic valuation. Our comfort was further enhanced by our familiarity with the company and its products. We understood the business; it was clearly within our circle of confidence. Buffett told us in Omaha in 1999 that he was having trouble finding a dollar's worth of value for \$.80. When we purchased this company we were experiencing the same trouble. Therefore, we elected to purchase a good business at what we felt was a fair price.

The Rest of the Story

Because the margin of safety was not substantial, say over 50%, we chose not to concentrate in BUD. We limit our concentration strategy to "homeruns" and "no-brainers." We purchased 120 shares at \$42.125 per share in late September 2001.

By May of 2002 we sold our position in BUD for over \$52. In less than six months we recorded a 24.5% gain in this holding.

Why did we sell?

Insider sales of 810,358 shares in the month prior to our selling became a concern. The majority of these sales had been from Chairman Busch III, with 220,368 shares sold for proceeds of \$10,918,460, Vice-President Busch IV, with 113,543 shares sold for proceeds of \$5,610,357, and President Stokes, with 107,000 shares sold for proceeds of \$4,568,800. Therefore, top officers had sold \$21,097,617 worth of stock in the last

month. Reviewing our intrinsic value we found BUD's appreciation resulted in its shares selling to be selling at a negative 2.8% Margin of Safety. Having identified a more attractive opportunity for our funds, we sold our position and reinvested the proceeds in an issue offering a greater discount to intrinsic value.

Sell Decisions

Good purchases will limit portfolio turnover. Buffett is fond of saying: "Our portfolio shows little change. We continue to make more money when snoring than when active." By limiting sale decisions you limit trading costs and defer taxes that can result in a substantial increase in return.

Sound purchases should be held according to Buffett's advice below:

Inactivity strikes us as intelligent behavior. Neither we nor most business managers would dream of feverishly trading highly-profitable subsidiaries because a small move in the Federal Reserve's discount rate was predicted or because some Wall Street pundit had reversed his views on the market. Why, then, should we behave differently with our minority positions in wonderful businesses? The art of investing in public companies successfully is little different from the art of successfully acquiring subsidiaries. In each case you simply want to acquire, at a sensible price, a business with excellent economics and able,

honest management. Thereafter, you need only monitor whether these qualifications are being preserved.

If you own sound businesses, you should only be selling if either the company's favorable qualifications are deteriorating or upon approaching your intrinsic value calculation you determine your capital can be deployed substantially better in another issue in the market. The decision to sell BUD was the result of the latter.

Table I:

Berkshire's Corporate Performance vs. the S&P 500

Year	Annual Percentage Change		
	in Per-Share Book Value of Berkshire (1)	in S&P 500 with Dividends Included (2)	Relative Results (1)-(2)
1965	23.8	10.0	13.8
1966	20.3	(11.7)	32.0
1967	11.0	30.9	(19.9)
1968	19.0	11.0	8.0
1969	16.2	(8.4)	24.6
1970	12.0	3.9	8.1
1971	16.4	14.6	1.8
1972	21.7	18.9	2.8
1973	4.7	(14.8)	19.5
1974	5.5	(26.4)	31.9
1975	21.9	37.2	(15.3)
1976	59.3	23.6	35.7
1977	31.9	(7.4)	39.3
1978	24.0	6.4	17.6
1979	35.7	18.2	17.5
1980	19.3	32.3	(13.0)
1981	31.4	(5.0)	36.4
1982	40.0	21.4	18.6
1983	32.3	22.4	9.9
1984	13.6	6.1	7.5
1985	48.2	31.6	16.6
1986	26.1	18.6	7.5
1987	19.5	5.1	14.4
1988	20.1	16.6	3.5
1989	44.4	31.7	12.7
1990	7.4	(3.1)	10.5
1991	39.6	30.5	9.1
1992	20.3	7.6	12.7
1993	14.3	10.1	4.2
1994	13.9	1.3	12.6
1995	43.1	37.6	5.5
1996	31.8	23.0	8.8
1997	34.1	33.4	0.7
1998	48.3	28.6	19.7
1999	0.5	21.0	(20.5)
2000	6.5	(9.1)	15.6
2001	(6.2)	(11.9)	5.7
Average Annual Gain--1965-2001			
Overall Gain--1964-2001			
22.6%			
11.0%			
11.6%			
194,936%			
4,742%			
190,194%			

Table II:**Low Price In Relation To Tangible Book Value**

Roger Ibbotson, Professor in the Practice of Finance at Yale School of Management and President of Ibbotson Associates, Inc., a consulting firm specializing in economics investments and finance, in Decile Portfolios of the New York Stock Exchange, 1967-1984, Working Paper, Yale School of Management, 1986, studied the relationship between stock price as a percentage of book value and investment returns. To test this relationship, all stocks listed on the New York Stock Exchange were ranked on December 31 of each year, according to stock price as a percentage of book value, and sorted into deciles. (A decile is 10% of the stocks listed on the New York Stock Exchange.) The compound average annual returns were measured for each decile for the 18-year period, December 31, 1966 through December 31, 1984.

As shown below, stocks with a low price to book value ratio had significantly better investment returns over the 18-year period than stocks priced high as a percentage of book value.

Stock Price as a Percentage of Book Value, 1967-1984

Decile	Compound Annual Return	Value of \$1.00 Invested on 12/31/66 at 12/31/84
1 (Lowest price as % of book value)	14.36%	\$12.80
2	14.40%	12.88
3	14.39%	12.87
4	12.43%	9.26
5	8.82%	4.98
6	8.36%	4.6
7	7.69%	4.09
8	5.63%	2.83
9	5.26%	2.65
10 (Highest price as % of book value)	6.06%	3.06

Table III:**Stocks Selling at Discounts to Net Current Assets**

Tweedy, Browne, using the same methodology over the same period, examined the historical returns of the stocks of (i) unleveraged companies which were priced low in relation to book value and (ii) unleveraged companies selling at 66% or less of net current asset value in the stock market. The sample included only those companies priced at no more than 140% of book value, or no more than 66% of net current asset value in which the debt to equity ratio was 20% or less. The results of this study of unleveraged companies that were priced low in relation to book value and net current asset value are presented in below:

Unleveraged Companies: Price in Relation to Book Value, and Stocks Priced at 66% or Less of Net Current Asset Value, April 30, 1970 through April 30, 1981

		Holding Period					
Stock Selection Criteria		6 Months		1 Year		2 Years	
		Average Return	S & P 500	Average Return	S & P 500	Average Return	S & P 500
140%-	120% of book value	1.60%	1.10%	15.80%	8.50%	36.50%	18.20%
120%-	100% of book value	0.2	1.1	18	8.5	36.7	18.2
100%-	80% of book value	0.8	1.1	19.4	8.5	39.4	18.2
80%-	70% of book value	2	1.1	24.3	8.5	45.5	18.2
70%-	60% of book value	1	1.1	19.8	8.5	42.1	18.2
60%-	50% of book value	1	1.1	19.8	8.5	49.7	18.2
50%-	40% of book value	1.4	1.1	23.7	8.5	53.7	18.2
40%-	30% of book value	6.7	1.1	18.2	8.5	52.1	18.2
30%-	0% of book value	8.6	0.7	32.8	6.8	60.2	20.8
	66% of net current asset value	7.5	0.7	34.9	9.1	63.5	20.8

Table IV:

Low Price in Relation to Earnings

Henry Oppenheimer, in "A Test of Ben Graham's Stock Selection Criteria," Financial Analyst Journal, September-October, 1984, examined the investment performance of the low price/earnings ratio stock selection criteria developed by Graham. This study screened securities listed on the New York and American Stock exchanges to select the issues that met Graham's criteria on each March 31 from 1974 through 1980. An investor who had employed Graham's criteria during this period achieved a mean annual return of 38% as compared to 14% per year, including dividends, from the market index, the CRSP index of NYSE-AMEX securities. The results are shown below:

Benjamin Graham's Price/Earnings Ratio Criteria

Holding Period	Ben Graham Low P/E	NYSE-AMEX	Mean Firm Size	Median Firm Size
	Annualized Return	Annualized Return	(Millions)	(Millions)
4/74-3/76	26.16%	11.28%	\$178.80	\$27.80
4/75-3/77	38.4	14.76	368.9	40.4
4/76-3/78	25.56	0.6	75	38.8
4/77-3/79	29.64	9.96	62.3	33.1
4/78-3/80	29.16	14.88	460.6	46.5
4/79-3/81	32.28	23.04	183.9	61.5
4/80-12/81	46.68	18	573.1	131

Table V:

Small Market Capitalization

Rolf Banz ranked all New York Stock Exchange listed companies according to market capitalization each year from 1926 through 1980, sorted the companies into quintiles, and measured the annual investment returns, on a market capitalization weighted basis, of each quintile. The results are shown below:

**Total Annual Returns on NYSE Stocks, 1926-1980
Sorted into Quintiles According to Market Capitalization**

	Quintile				
	1 (Largest)	2	3	4	5(Smallest)
Compound Annual Return	8.9%	10.1%	11.1%	11.7%	12.1%
Value of \$1 Invested on 12/31/25 at end of 1980	\$108.67	\$200.22	\$333.76	\$443.69	\$524.00

TVA INVESTMENT CHALLENGE SYLLABUS

Spring 2002

Dr. Auxier, Instructor, Phone (865) 974-1714, Email auxier@utk.edu

Fax (865) 974-1716, Office Hours 3:30-4:30 p.m. MW and most Fridays 3:30-4:00 p.m..

COURSE REQUIREMENTS

- (1) Meet every Thursday, 5:00-6:30 p.m. in SMC 436 Class attendance is required.
- (2) Subscribe to the Wall Street Journal. (The Wall Street Journal Interactive edition on the web also provides access to Barron's, which is an excellent investment publication.) Every week you must read Barron's, and every day you must read the Wall Street Journal. These should furnish you with some good investment ideas. (See Felicia for subscription forms.) Also, as much as possible, catch the New York Times Business section on the Internet (it's free).
- (3) Join FMA, regularly attend meetings, attend TVA's Investment Challenge Conference and Job Fair (Opryland Hotel in Nashville), and journey to Omaha with us to meet with Mr. Warren Buffett in February 2002.
- (4) Actively research a number of companies and present the most promising research to the class. (Failure to perform this research will result in a poor grade.) Your research should be exhaustive and designed to either reject the company or suggest that it's a buy. You should include in your research a careful study of both the company and its competitor's annual reports, company visits -- if that's possible -- Conference Call information, study **Value Line Investment Survey** and **Standard & Poors Reports**, examine earnings estimates, insider sales and purchases, etc. **You've got to employ some type of screening tool in order to discover undervalued companies.** For initial screens, I rely heavily on morningstar.com's (or The Wall Street Journal's) daily stock high-lows and its lists of poorly performing industries, sectors and companies. **[An extremely useful screen is The Wall Street Journal Online Markets Data Center's 100 Biggest Losers and 52-Week Lows List. To find these, go to the Money and Investing section, and click the Markets Data Center. You're looking for good, simple companies that have been beaten way down. Every day you need to check these lists.]** *Remember that predictability is everything. If we don't have earnings and price predictability, we're not in the stock. Or after we've bought it we discover we don't have predictability, we're out of it. And you get predictability only from simple companies. (Buffett says that if it's not simple, he and Charlie won't understand it. If Charlie and Warren won't understand a company, you and I won't understand the company.) So look only at simple companies. They are the only stocks that give you predictability. All your life it would be good to remember John Bogle's view that "Simplicity is the master key to financial success."* [Bogle is founder of the Vanguard Group.] **Your research should include a calculation of the intrinsic value of the stock and the expected return assuming that the stock is held five years.** [Bertrand Russell, the philosopher, also believes that to an important extent, the happy life is a simple life. Buffett is a great admirer of Russell.]

- (5) Purchase a copy of Benjamin Graham's, **The Intelligent Investor**. We may have quizzes based on this material. (Buffett believes that this is by far the best book ever written on investments. I've been told that McKay's is a good place to purchase a used copy of The Intelligent Investor.) I plan to furnish you with some Warren Buffett Investment Philosophy material. If so, we may have a few quizzes based on it. *Poor quiz scores will likely mean a poor TVAIC grade, and not being a value investor definitely will mean a poor grade. Also, if you aren't a value investor -- in the style of Ben Graham and Warren Buffett -- you'll be dropped from this class.*
- (6) Track a hypothetical \$100,000 portfolio, say on Quicken or Yahoo Finance. Hand a copy of your portfolio in each Thursday along with a brief paragraph when you buy explaining why you like the stock. Or if you're selling, why you're selling. Concentration is fine, and you shouldn't be selling often. (Ignore dividends and commissions for this exercise.)

TVA Investment Challenge expectations are, in a word, high. In the past, some members of TVAIC have gotten a free ride, an easy A. It won't happen in the future. If we're going to beat the competition, we've all got to put a great effort into this class.

WHAT WE ARE ATTEMPTING TO ACHIEVE IN TVA INVESTMENT CHALLENGE

Our primary aim is to transform you into intelligent, able, gifted investors. If this aim is substantially achieved, we should perform well in the TVA Investment Challenge competition -- winning many more than our share of prizes. This is an admittedly challenging goal, but it's also substantially doable if you'll really set your minds to it. Long ago, Ben Graham argued that you don't have to do extraordinary things to achieve extraordinary investment results. This goal is doable! And we'll also win our share of TVAIC contests if we're substantially achieving this aim. But it will require a great deal of work and discipline. What's the payoff? Riches beyond your imagination. *In a real sense, we're prospecting for gold, we know it's there for certain -- even a rich vein -- and we know that it's discoverable if only we'll do our homework, properly discipline ourselves, and develop the right mindset.*

What's involved in this process of becoming an "intelligent investor?"

- (1) Gain actual investment experience. The TVA Investment Challenge assumption - - and it's a very good one -- is that to an important extent, you learn to invest by investing.
- (2) Learn and apply a sound investment philosophy. The investment philosophy we'll study and apply is Warren Buffett's investment philosophy. Always ask yourself this question before investing: "Would Buffett buy this stock?" If the answer is no, then you shouldn't buy it, and TVAIC shouldn't buy it.
- (3) Develop an emotional framework conducive to successful investing. For example, for Buffett, investing is merely a game that he enjoys immensely. The money's

not important to him, and this enables him to think clearly. My Christian beliefs help me to think clearly.

- (4) Gain as much in-depth knowledge as you can about as many companies and industries as you can. The more companies and industries you understand, the larger your investment universe and the greater the probability that you'll discover wonderful investment opportunities. But Buffett says that the size of your circle of competence isn't as important as clearly delineating that circle. Putting it in other words, Buffett has stated that, "The first thing is to know what you know, and to know what you don't know." It's a bad thing to think you understand a company, invest in it, and then later find out that you really didn't understand it from the outset. When you invest in a company you don't understand, the investment result is a flip-of-the-coin, and that's not going to make you any money.

SOME PROBLEMS WE MAY ENCOUNTER APPLYING WARREN BUFFETT'S INVESTMENT PHILOSOPHY.

- (1) Buffett is a strong believer in concentration; if an investment is really good, then you buy worthwhile amounts of it. Based on his rationale, we probably should own no more than about 6-10 stocks, and yet TVA's rules require us to own at least 15 stocks.
- (2) Buffett believes in buying stock only when the stock has a nice **margin of safety**, meaning that it is worth substantially more than you have to pay for it. (Ben Graham often suggested at least 50% more. But Buffett told us in Omaha in 1999 that he has trouble finding a dollar's worth of value for \$.80, and right now I wouldn't be surprised if he's got the same problem. To be sure, we'll have trouble finding good value.
- (3) Buffett -- who's arguably the world's greatest living investor -- has written that he would settle for one good investment idea a year. Big ideas are rare, and yet that's what we need and what we're looking for. [In Janet Lowe's new biography of Charlie Munger titled, Damn Right! (which I strongly recommend), Munger states that he and Buffett have only averaged about one big idea every three years.] That's why in practice you should concentrate if you want better-than-average investment results. Big ideas are so rare that when you do stumble across one, you need to buy a meaningful amount of that stock. Good investment ideas are rare, and yet we're supposed to come up with, maybe, 15 in three months. This is an especially big problem now because the stock market is high. [If you're content with average investment results, you should buy a highly diversified, minimal fee, broad-based index fund, like Vanguard's Total Stock Market Index fund. But in TVA's Investment Challenge, we can't invest in mutual funds or REITs.]
- (4) Buffett is a strong believer in long-term investing. (He says, "If you don't want to own a stock for ten years, then don't think of owning it for ten minutes.") Thus, Buffett's philosophy may not work well for us in the short-term. But we still should generally buy stocks with good long-term prospects. Doing so will win us more contests than following any other investment practice. [If you know what you're doing, you can predict with useful accuracy long-term price movements; but often you don't have very useful short-term price predictability. If a stock is in fact

Appendix

undervalued, you know it will eventually adjust upward, but you don't know when it will do so.]

Al Auxier, August 22, 2001

Finally, any team member not making a substantial contribution to TVAIC will be dropped from the program at the end of the semester or sooner. We have to be tough about TVAIC membership if we are to excel in this program.