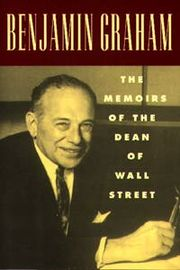
***Value Investing, Topic One:***

***The Masters***



***Benjamin Graham***

* ***How he got started.***

I remember sitting in a three-tiered classroom at U.C.L.A.’s Graduate School of Management the first day of the new quarter. The year was 1976 and we were all trying to guess who the instructor for our Investments class would be. The class began with the door opening and two men entering, one in a wheelchair, the other pushing him. The slightly built eighty two year old man in the wheel chair with the large head was none other than the legendary “Dean of Wall Street,” Benjamin Graham. Even though the body was frail and the face wrinkled, the thoughts and clarity spoken by Ben were clearer than his sparkling blue eyes. “The Legend”, “The Dean of Wall Street,” “The Father of Fundamental Analysis,” was actually going to teach our class about investing in securities. This was no shyster like Michael Milkin, but the man who started it all, the man who was responsible for developing fundamental stock analysis as an art and a science, a financial giant. But who was this man, Benjamin Graham? What made him so special? And why did every Finance Professor at the School come by to sit in on the class? Was it to pay homage or was it to ridicule the existence of fundamental analysis? The semester was new and the students were anxious to learn from the Master. But I kept asking myself who was Benjamin Graham?

Benjamin Graham was born as Benjamin Grossbaum in London, England on May 8, 1894. Benjamin was just one year old when the Grossbaums decided that the household, which included three active little boys, would move to New York to expand the family import-export business. The Grossbaums passed through Ellis Island and were grateful they could speak English because there were so many immigrants that day who could not. Ben’s father died only a few years after arriving in America.

At the age of 13, Ben had his first taste of the stock market. His mother opened an account to buy an odd lot of U.S.Steel. The stock market was already running wild due to excessive speculation and was racked with high interest rates. Ben and his mother watched as the panic of 1907 wiped out Dora Grossbaum’s meager account. This forced the widow and her family into a hand-to-mouth existence and they all had to live with Dora’s brother, Maurice Gerard. This experience taught Ben a valuable lesson about speculation and the stock market.

Ben’s school years were poverty laden but memorable. “When I was in elementary school in this city (New York), more than 70 years ago, we had to write various maxims in our copybooks. The first on the list was ‘honesty is the best policy.’ It is still the best policy”[[1]](#footnote-1). Following grammar school, Ben attended Boys High School in Brooklyn. When Ben finished high school he took a national scholarship examination. Unknown to him, his exam was mistakenly switched with a cousin who had the same last name. The cousin was awarded a scholarship at Columbia and Ben went to work. About six months into the new school year at Columbia, the mistake was discovered and Ben (who scored the second highest ever on the exam) was invited to attend Columbia.

Even though Ben was finally in his rightful place at Columbia, money was still very tight. Though Ben’s brothers pitched in to help support him, it was not enough. Ben was compelled to drop out of day classes and take a full-time job with U.S. Express. Ben finally earned enough to continue his education and graduated in June 1914. Ben graduated Phi Beta Kappa mastering mathematics, philosophy, English, Greek, Latin and music. The deans of three departments (English, mathematics and philosophy) stepped forward with offers of teaching position. And, it was purely by luck that Ben went to work on Wall Street. It just so happened that Columbia’s Dean Frederick Keppel was talking to a member of the New York Stock Exchange about this man’s son’s poor grades. The man asked the Dean if he knew of any bright students looking for a job and the rest is history. Ben took his first job on Wall Street at the age of 20 with the brokerage firm of Newburger, Henderson & Loeb.

Ben started his new job in 1914 at the grand salary of $14 per week (which is the equivalent of about $732 today adjusted for inflation). Ben’s first relevant assignment was to frame short, concise descriptions of every bond that was listed on the company’s daily list of recommendations. Ben was soon promoted to salesman but rapidly discovered that he was no salesman. Finally, he was assigned the duties of the firm’s statistician. This is the job he loved and thrived at.

Ben’s biggest problem with his new job was obtaining reputable data on the various companies that he began to analyze. Insider information was the key to big profits and it is clear that a great deal of price manipulation existed in the market. In fact there were few regulations and no SEC to oversee the markets. Ben was often heard complaining about the “three M’s,” -- mystery, manipulation, and (thin) margins.

As Ben continued his work for Newburger, he also managed some investments and business deals of his own. Among Ben’s clients was Algernon Tassin, a professor of English at Columbia. Tassin set Ben up with $10,000 of capital, with the agreement that the profits and losses would be split equally between them. From this experience Ben learned a valuable lesson when he was forced to sell shares in a down market. He related in class many times that a true investor seldom is forced to sell his shares but he sells in his own time, when the investment has matured and suitable earnings have been realized.

By the end of World War I, Ben was made a partner in Newburger, Henderson & Loeb, at age 26. Considering the chaotic and dangerous postwar bull market of 1919-1921 his promotion was all the more significant because of his successes and achievements. Another saying Ben often shared in class was that the sillier the market’s behavior, the greater the opportunity for the business-like investor. Ben often said that the intelligent investor “profits from folly rather than participates in it.”

In 1923, Ben was tempted away from Newburger, Henderson & Loeb for a third time. A group of clients and friends, impressed with Ben’s skills, proposed the formation of a $250,000 account. Ben’s salary was set at $10,000 per year, which is the equivalent of approximately $270,000 today adjusted for inflation. The investors would receive at least a 6% minimum return, and above that, Ben would be entitled to 20% of the profits. The New York Stock Exchange recently had tightened its rules on the amount of underlying capital required by its member firms. Because Ben had brought in so much additional investment money to Newburger, the firm could not accommodate all the additional investors. In addition, Ben’s operation had moved beyond the traditional scope of his employer, which were still mostly brokerage functions. Ben was allowed to leave the company to go out on his own, but Newburger agreed to let him use an office there, in turn for doing his securities transactions through them.

Benjamin Graham, in 1923, was twenty-nine years old when he started the Grahar Corporation, named after Graham and a major investor by the name of Louis Harris. The fund initially drew $500,000, yet Ben was not the major investor. The Grahar Corporation was eventually dissolved in 1925 and Ben launched the Benjamin Graham Joint Account. And, between 1925 and 1928, the Joint Account delivered an average annual return of 25.7%. By the start of 1929, the initial value of the Joint Account ($450,000) had grown to $2,500,000. Much of that gain represented capital appreciation rather than additional contributions. In the meantime, the business was expanding so rapidly that Ben needed a partner to take care of the administration duties. Graham hired the brother of a child-hood friend, Jerry Newman, and the Graham Newman Investment Fund was born. The year 1928 also was the year that Ben went back to school, not to take classes but to teach a class in “Advanced Security Analysis.” The class was offered at night to Columbia students and many faculty members attended as well. It was at this time that Graham met David Dodd, a professor at Columbia who had worked at the National Bank of Commerce. Together, the two would enter into a life-long relationship and quest to teach interested students everything they knew about fundamental stock analysis and selection. The relationship would ultimately result in the publication of the seminal work *Security Analysis* by Graham and Dodd.

By 1929, Ben was riding high. He had just finished a year with a 60% return for the Joint Account, compared to a 51% return for the DJIA. Ben’s personal net profit that year alone was more than $600,000 or the equivalent of $13.3 million in today’s dollars. At 35 years of age, Ben was now a seasoned investor and had recently received a job offer from ***Bernard M. Baruch***, probably the wealthiest financier of the day. Yet this way of wealth and life was rapidly headed for a collision with economic catastrophe. When Ben reflected on events some years later, he found it strange that though he sensed danger, he did not completely sell out of the market. Apparently, he did not yet realize that a **rising tide floats all boats**. There was market turbulence in late summer and early autumn, but the precipitous fall came on Black Tuesday, October 29, 1929. That single day of horror cost the stock market $14 billion ($368 billion today). The market calmed at the end of 1929 and rallied with many investors believing that they had seen the worst. Ben’s Joint Account finished the year with a loss of 20% compared to a 15% decline in the DJIA.

The next year, 1930, turned out to be the worst in Ben’s life. By the end of the year, the Joint Account suffered a 50% skid, compared to a 29% tumble for the DJIA. Fortunately, Jerry Newman’s father-in-law Elias Reiss contributed $75,000 to the Joint Account that kept it afloat through the year. Within two years, Ben was narrowing the margin of loss. For the three-year period between 1929 and 1932, the Joint Account lost 70% of its value. But in 1931, the Joint Account was down only 16%, compared to 48% for the DJIA. In 1932, the Joint Account declined only 3 percent. Ben never forgot the punishment he had suffered for carrying a 44% margin of debt in the Joint Account.

At the Great Depression’s peak, one-third of the United States labor force was unemployed. Between 1929 and 1933, the gross national product plunged from $103 billion to $55 billion, the equivalent of $2.71 trillion to 1.19 trillion. Graham struggled to contain the losses of his investment fund, which he and his partner Jerome Newman eventually succeeded in doing. For five years while they worked out the problems, Graham and Newman managed their investment operations without pay. By 1932 the worst was over for the Graham-Newman investment fund. Ben had always been a prudent man. But, before the crash, he had taken a few shortcuts and he made some mistakes. Though he was able to stumble back and regain his footing in the market rather quickly, after Black Tuesday, Ben’s high-risk days were over. Afterward, he struggled to squeeze the best possible return from his investments, while at the same time seeking that wide***margin of safety***. He avoided aggressive deals in which someone would be hurt, perhaps because he had seen such extreme suffering. Ben had always been a prudent man, basing his decisions on actualities rather than optimism. But before the crash, he had taken a few shortcuts and he made some mistakes. Though Ben was able to stumble back and regain his footing in the market rather quickly, his high-risk days were over.

***Mr. Market***



I remember one day Ben started class by telling a story about Mr. Market. This story made a lasting impression upon me and aptly describes the behavior of the stock market. He said that we should imagine a fellow whose name was Mr. Market as a partner in business with you. Without fail, Mr. Market appears daily and names a price at which he will either buy your investment in the business or sell you his. Even though the business that the two of you own may have economic characteristics that are stable, Mr. Market’s quotations are not, because Mr. Market suffers from emotional instability. Sometimes he is extremely happy and can see only the positive factors affecting the business. During these periods, he names a very high buy-sell price because he fears you will snap up his interest and rob him of colossal gains. At other times he is in a state of depression and can see nothing but doom and gloom. On these occasions he will name any price low price since he is terrified that you will unload your interest on him.

Mr. Market has another endearing characteristic. He doesn’t mind being ignored. If his quotation is uninteresting to you today, he will be back with a new one tomorrow. Transactions are strictly at your option. Under these conditions, the more maniac-depressive his behavior, the better off you is. But, like Cinderella at the ball, you must heed one warning or everything will turn into pumpkins and mice: Mr. Market is there to serve you, not to guide you. It is his pocketbook, not his wisdom that you will find useful. If he shows up someday in a foolish mood, you are free to either ignore him or to take advantage of him but it will be disastrous if you fall under his influence. Indeed, if you aren’t certain that you understand and can value your business far better than Mr. Market, you don’t belong in the game. As they say in poker, “If you’ve been in the game 30 minutes and you don’t know who the patsy is, you’re the patsy.”

***The Graham Model***



At the core of Graham’s technique is the importance of not buying a stock but investigating as if you were buying a business. To a large extent, the intrinsic value is revealed in the company’s earnings power. However, a company’s “normal earnings” could be considerably more or less than reported earnings. Earning power should be evaluated in light of past earnings and long-term earning trends. ***Earning power defines a company’s future prospects***. If the share price advances, it is because most investors expect earnings to grow.

Graham argued a strong case for dividends in the classroom. His argument was sound based on his many years of experience. The argument went something like this. The question addressed was whether it is wiser for management to pay earnings out to shareholders in terms of dividends or to plow the money back into the company. Graham answered the question by asking another -- how are the earnings to be used? If they are misused, they cannot possibly benefit the shareholder. In such cases, the earnings should be paid out to the owners. If on the other hand, dividends can be reinvested in the firm and create a greater value dollar for dollar, then by all means they should be retained.

Ben was a prophet in a very specialized but important realm of life. He preached commandments that any investor can use as stars when navigating the vast and mysterious seas of the investment world. When in doubt, I always pull out my class notes and re-read the wisdom of the master. In simplified terms, here are the 14 points Ben stressed in class and in his books:

First, be an investor, not a speculator. Ben defined a speculator as one who sought to profit from market movements, without primary regard to intrinsic values. The prudent investor, on the other hand, is one who buys only at prices supported by underlying value and reduces his stock holdings when the market enters the speculative phase of a sustained advance.

Second, know the asking price. Determine the market price by multiplying the share price by the number of shares outstanding. If you bought the company would the earning power justify paying such a price? Further, you want to make sure that the current market price is substantially discounted from the intrinsic value determined by the future earning power of the firm.

Third, search the market for bargains. The Graham model calculated something called the **“Net Current Asset,”** which is defined as the current assets minus current liabilities minus preferred stock minus long-term debt. By purchasing stocks below the NCA, the investor buys a bargain because nothing at all is paid for the fixed assets of the firm. Unfortunately, NCA stocks are nearly impossible to find, and when one is found, this is only the beginning of the analysis.

Fourth, Ben devised a simple formula to tell if a stock is under priced. The concept has been tested in many different markets and still works today. It takes into account the company’s earnings per share (EPS), its expected earnings growth rate (R), and the current yield on AAA rated corporate bonds (Y). The intrinsic value of a stock is equal to: EPS (2R + 8.5) x Y. The number 8.5 was the appropriate price-to-earning ratio for a company with static growth. P/E ratios have risen, but a conservative investor still will use a low multiplier.

Fifth, an investor should regard corporate figures with suspicion. It is a company’s future earnings that will drive its share price higher, but estimates are based on current numbers, of which an investor must be wary. Even with more stringent rules, current earnings can be manipulated by creative accounting methods. An investor is urged to pay special attention to reserves, accounting changes and footnotes when reading company documents. As for estimates of future earnings, anything from false expectations to unexpected world events can repaint the picture.

Sixth, don’t stress out. Realize that you are unlikely to hit the precise “intrinsic value” of a company. A margin of safety provides peace of mine. Graham and Dodd suggest giving yourself a band of 20 percent above or below, as a range in determining fair market value.

Seventh, don’t sweat the math. Ben once said in class, “In over 50 years of Wall Street experience and study, I have never seen dependable calculations made about common stock values, or related investment policies that went beyond simple arithmetic or the most elementary algebra. 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, and usually also to give speculation the deceptive guise of investment.”

Eighth, is to diversify. Graham used to recommend a minimum of 25% in both bonds or bond equivalents, and another 25% in common stock. Once these two are achieved, the investor can then divide the remaining 50% of his/her wealth between the two depending on the two markets. Using this rule, an investor would sell stocks when stock prices are high and buy bonds. When the stock market declines, the investor would sell bonds and buy bargain stocks. At all times maintaining the minimum 25% of the assets in stocks or bonds. As a rule of thumb, according to Graham, an investor should back away from the stock market when the EPS on leading indices is less than the yield on high-quality bonds. When the reverse is true, lean towards stocks.

Nine, diversify among stocks. Graham usually held 75 or more stocks in his portfolio at any given time. Ben suggested that individual investors try to have at least 30 different holdings, even if it is necessary to buy odd lots.

Tenth, when in doubt, stick to quality. Companies with good earnings, solid dividend histories, low debts and reasonable price-to-earnings ratios serve the investor best. Ben used to say, “Investors do not make mistakes, or bad mistakes, in buying good stocks at fair prices. They make their serious mistakes by buying poor stocks, particularly the ones that are pushed for various reasons. And sometimes-in fact, very frequently-they make mistakes by buying good stocks in the upper reaches of bull markets.”

Eleven, use dividends as a clue for success. A long record of paying dividends, as long as 20 years, shows that a company has substance and is a limited risk. Chancy growth stocks seldom pay dividends.

Twelve, defend your shareholder rights. Ben once said, “I want to say a word about disgruntled shareholders, in my humble opinion, not enough of them are disgruntled. And one of the great troubles with Wall Street is that it cannot distinguish between a mere troublemaker or “strike suitor” in corporate affairs and a stockholder with a legitimate complaint that deserves attention from his management and from his fellow stockholders.”

Thirteen, be patient. Every investor should be prepared financially and psychologically for the possibility of poor short-term results. In the 1973-74 decline the investor would have lost money on paper, but if he’d held on and stuck with the approach, he would have recouped in 1975-76 and gotten his 15% average return for the five-year period. Remember that an investor has a long-term horizon and is not cast about by every wind that blows.

Fourteen, think for yourself. Ben used to say, “There are two requirements for success on Wall Street, one, you have to think correctly; and second, you have to think independently.” The true investor will always continue to search for better ways to ensure safety and maximize growth. Don’t ever stop thinking.

***Philip Fisher***



After attending the Stanford University Graduate School of Business Administration, Philip Fisher began work as an analyst at the Angle London & Paris National Bank in San Francisco. In less than two years, he was made head of the bank’s statistical department. It was from this platform that he witnessed the 1929 stock market crash. After a brief career with a local brokerage house, Fisher decided to start his own investment-counseling firm in March, 1931.

Fisher found that he had two advantages. First, almost every investor, with any money after the stock market crash, was likely unhappy with his current broker. Second, business people, in the midst of the depression, had plenty of time to talk with him. Fisher, through these many conversations, led him to believe that superior profits could be made by (1) investing in companies with above average potential and (2) by aligning oneself with the most capable management. Fisher developed a “point system” that qualified a company by the characteristics of its business and its management:

1. Does the company have products or services with sufficient market potential to make possible a sizeable increase in sales for at least several years?



1. Does the management have a determination to continue to develop products or processes that will still further increase total sales potentials when the growth potentials of currently attractive product lines have largely been exploited?
2. How effective are the company's research and development efforts in relation to its size?
3. Does the company have an above-average sales organization?
4. Does the company have a worthwhile profit margin?
5. What is the company doing to maintain or improve profit margins?
6. Does the company have outstanding labor and personnel relations?
7. Does the company have outstanding executive relations?
8. Does the company have depth to its management?
9. How good are the company's cost analysis and accounting controls?
10. Are there other aspects of the business, somewhat peculiar to the industry involved, which will give the investor important clues as to how outstanding the company will be in relation to its competition?
11. Does the company have a short-range or long-range outlook in regard to profits?
12. In the foreseeable future, will the growth of the company require sufficient equity financing so that the larger number of shares then outstanding will largely cancel the existing stockholders' benefit from this anticipated growth?
13. Does the management talk freely to investors about its affairs when things are going well but quot;clam upquot; when troubles or disappointments occur?
14. Does the company have a management of unquestionable integrity?

The characteristic of a business that most impressed Fisher was a company’s ability to grow sales and profits over the years at rates greater than the industry average. In order to do so, a company needed to possess “products or services with sufficient market potential to make possible a sizable increase in sales for at least several years.” Fisher was not so much concerned with consistent annual increase in sales; rather, he judged a company’s success over a period of several years. He was aware that changes in the business cycle would have a material effect on sales and earnings. However, Fisher identified companies that, decade by decade, showed promise of above-average growth. The two types of companies that could expect to achieve above-average growth were companies that were: 1) “fortunate and able” and were (2) “fortunate because they are able.”



A company’s research and development efforts contribute mightily to the sustainability of the company’s above-average growth in sales. Even non-technical business, he noted, need a dedicated research effort to produce better products and more efficient services. In addition to research and development, Fisher also examined a company’s sales organization. According to him, a company could develop outstanding products and services, but unless they were “expertly merchandised,” the research and development effort would never translate into revenues. It is the responsibility of the sales organization to help customers understand the benefits of a company’s products and services. A sales organization, Fisher explained, should also monitor its customer’s buying habits and be able to spot changes in a customer’s needs. The sales organization, according to Fisher, becomes the invaluable link between the marketplace and the research and development unit.

However, market potential alone is insufficient. Fisher believed that, even though capable of producing above-average sales growth, a company was an inappropriate investment if it was unable to generate profits for shareholders. “All the sales growth in the world won’t produce the right type of investment vehicle if, over the years, profits do not grow correspondingly.” Fisher examined a company’s profit margins, its dedication to maintaining and improving profit margins, and, finally, its cost analysis and accounting controls. Fisher sought companies that were not only the lowest-cost producer of products or services but were dedicated to remaining that way. A company with a low breakeven point, or a correspondingly high profit margin is better able to withstand depressed economic conditions. Ultimately, it can drive out weaker competitors thereby strengthening its own market position. In order for a company to bring down the costs of doing business while understanding the cost of each step in the production process, a company must have adequate accounting controls and cost analysis.

Fisher also had an additional concern about a company, which he identified as the ability of a company to grow in the future without requiring additional equity financing. If a company is only able to grow by issuing equity the larger number of shares outstanding will cancel out any benefit that stockholders might realize from the company’s growth. Therefore, a company with high profit margins is better able to generate funds internally in the form of cash flows first and ultimately retained earning. These funds can be used o sustain its growth without diluting existing shareholder’s ownership, a situation caused by equity financing.

# John Burr Williams



John Burr Williams graduated from Harvard University in 1923 and went on to Harvard Business School, where he got his first taste of economic forecasting and security analysis. After Harvard, he worked as a security analyst at two well-known Wall Street firms. He was there through the 1920s and the disastrous crash of 1929. In 1932 he returned to Harvard to earn an advanced degree in economics. When it came time to choose a topic for his dissertation, he asked the advice of the famous Joseph Schumpeter, the noted Austrian economist. Schumpeter suggested that he look at the “intrinsic value of common stock.” Williams finished his dissertation in 1937, had it published in 1938 and it has become a classic entitled, *The Theory of Investment Value.* Williams model is better known today as the dividend discount model or discounted net cash-flow model, provides a way to put a value on a stock or a bond based on future expected cash flows. To know what a security is worth today, estimate all the cash it will earn over its lifetime and then discount that total back to a present value. It is the underlying methodology that Warren Buffett uses to evaluate stocks and companies today.

We can condense Williams theory as: “The value of a business is determined by the net cash flows (owners cash flows) expected to occur over the life of the business discounted at an appropriate interest rate (required rate of return).”

Williams model is a two-step process. First it measures cash flows to determine a company’s current and future worth. How does he measure cash flows? One way is dividends paid to shareholders. For companies that do not distribute dividends, Williams believed that in theory all retained earnings should eventually turn into dividends. Once a company reaches its mature stage, it would not need to reinvest its earnings for growth so the management could start distributing the earnings in the form of dividends. “If earnings not paid out in dividends are all successfully reinvested, then these earnings should produce dividends later; if not, then they are money lost. In short, a stock is worth only what you can get out of it.”



The second step is to discount those estimated cash flows, to allow for some uncertainty. We can never be exactly sure what a company will do, how its products will sell, or what management will do or not do to improve the business. There is always an element of risk, particularly for stocks. Williams uses either the interest rate for long-term U.S. bonds, or when interest rates are very low, he uses the average cumulative rate of return of the overall stock market (about 12% today).

***Sir John Marks Templeton***



Sir John Marks Templeton was a prominent billionaire financier and investment adviser, who founded the Templeton Group of Mutual funds, which is now part of the Franklin-Templeton Group. He started his investment career with a borrowed $10,000 during the great depression, and his various management entities now oversee over $65 billion worth of assets. Sir John also founded “The Templeton Progress in Religion Prize,” for the purpose of promoting world peace by first raising human consciousness through the advancement of theological thought. The Templeton Award is the largest monetary prize in the world, well over $1 million.

Sir John also founded “Templeton College,” which is the business school at Oxford University, which is not only a business college, but per Templeton’s requirements, is also an ongoing business concern that does worldwide consulting to cover its operating expenses. While on the Board of Directors at Princeton University as finance chairman, Princeton’s investment portfolio exploded with profits so that today, Princeton is the wealthiest leaning institution in the world. The investment mind of Templeton has left its mark on the way in which wise investors invest and has had a profound effect on all of humanity. Forbes Magazine calls Sir John, “The Dean of International Investors.... one of a handful of true investment greats in a field crowed with mediocrity and bloated reputations.” Sir John has been constantly referred to by Forbes Magazine, The Wall Street Journal, and the Investment Community at large as “The Dean of International Investing.” Sir John’s investment record is important because it spans seven “successful” decades. Perhaps one of Sir John’s most important investment rules holds that “all investment techniques lose their utility for finding great investments once they become popular.” This is why Templeton hold that common sense is what is responsible for his phenomenal investment success. In the 1970s when Rotheschild’s Bank was restructuring its international investment portfolio they called in the best in the business to help them and the man they picked was Templeton.

Why is common sense so important? A good investment analyst might look at over 100 financial variables to determine an intrinsic value of a company and its stock. Much of what Sir John does is this comparative analysis. When you hear him speak about investments or investing, his analysis is usually peppered with discriminating comparatives. Comparatives on every level. He begins on the macro level, allowing him to be in the right country or economy, or even the right industry at the right time, when it is substantatively undervalued and poised for a marked improvement. On the micro level, Templeton can find the particular companies that the market has undervalued. Sir John’s financial analysts take the time to run all of the necessary comparative analysis numbers. Many analysts and company research departments do not comb the world opportunity set as thoroughly as Templeton. Other analysts become infatuated with only the numbers, forgetting that the numbers are only abstractions from the past that need some clarification with present day company and environmental strengths, weaknesses, opportunities, threats, and all of the various constraints that face any company, economy, or industry. Common sense never forgets the big picture over the long-term investment horizon.

Comparative analysis is the method by which we measure the economic value or intrinsic value of anything to the market value. We compare things to find what is priced too high and too low in relation to every other thing. It is this open-minded simplicity that allowed Templeton to apply his analysis all over the world in different economies and political situations over many decades. Most quantitative models lose their utility over time. However, comparative analysis has maintained its utility. This is the cornerstone of Templeton’s common sense approach and to his continued success throughout recessions, depressions, and periods of great economic growth. Comparative analysis enables Templeton to go shopping in the “World Supermarket” of investment opportunity to find the stock markets that are trading at the greatest discounts to their actual intrinsic value. This is why in the past two and one half decades, Templeton has had over half of his funds assets invested in the U.S. at one time, Canada at another, Mexico at another, and Japan at yet another time. Each time he simply moved his funds money to where the greatest opportunity for growth existed.

The question is how does Sir John ascertain if a market is over or undervalued? If Sir John were to evaluate the under or overpricing of the stock market in 1993, he might look at the last 50 to 60 years of data. For convenience, lets say the last 55 years or from 1938 to 1993. In 1938, the relative adjusted GDP or gross income was approximately 67 billion dollars, by 1993 the GDP was over 6.27 trillion dollars...a factor increase of over 93 times, which means that the GDP in 1993 was approximately 93 times larger than it was in 1938. Over the same time period the S&P 500 had only expressed some of the GDP’s incredible growth. This lagging behind of the S&P 500 to such a large margin means that the U.S. market would grow substantially over the next few years was very probable. Of course the freedom of market forces and political as well as other considerations in America should be considered as well.

As a result of this type of analysis, Templeton has been characterized by many on Wall Street as the one analyst who keeps predicting ever-greater bull markets and seems to be right each time. In 1982, Templeton predicted at that time that he felt the DJIA would hit 5,000 before the year 2,000. At the time the DJIA was below 800. Of course the DJIA hit 5,000 in 1996. These predictions were merely a result of Templeton’s comparative analytics. Templeton knew that these were not crazy predictions, because the market indices had been lagging well behind our nation’s GDP for many years. Templeton knew that eventually the market would reflect this growth. If the real GDP of a particular country doubles over time, then the real value of stocks in that country should double over the same time horizon.

***Warren Buffett***



Warren Edward Buffett was born August 30, 1930, in Omaha, Nebraska. He is the son of Howard and Leila Buffett. Howard Buffett, a long-time resident of Omaha, was a local stockbroker and Republican congressman. As a boy, Warren Buffett was fascinated with numbers. He easily could keep track of mathematical calculations in his head. At age eight, Buffett began reading his father’s books on the stock market. When he was eleven, he marked the board at Harris Upham where his father was a broker. That same year he bought his first shares of stock, Cities Service Preferred.

When Buffett lived in Washington, D.C., while his father served in Congress, his interests turned entrepreneurial. At age thirteen, Buffett worked two paper routes, delivering the *Washington Post* and the *Washington Times-Herald*. With his savings, he acquired reconditioned pinball machines for $25 each and placed them in local barbershops. Soon Buffett owned seven machines and was taking home $50 a week. Later, with a high school friend, Buffett bought a 1934 Rolls Royce for $350 and rented it out for $35 a day. By the time he graduated from high school at sixteen, Buffett had saved $6,000.

While in his senior year at the University of Nebraska, Buffett read Benjamin Graham’s classic book, *The Intelligent Investor*. This treatise on investing so influenced Buffett that, after receiving his college degree, he left his hometown of Omaha and traveled to New York to study with Ben Graham at the Columbia Graduate Business School. After graduating from Columbia with a master’s degree in economics, Buffett returned to Omaha to serve a brief stint in his father’s brokerage firm. During this period, Buffett stayed in contact with his former teacher by writing to him about various invest ideas. In 1954, at Graham’s Invitation, Buffett moved to New York and joined the Graham-Newman Corporation. During his tenure at Graham-Newman, Buffett became fully immersed in his mentor’s investment approach.

In 1956, Graham-Newman disbanded. Graham, then 61, decided to retire. Buffett returned to Omaha. Armed with the knowledge he had acquired from Graham, and with the financial backing of family and friends, Buffett began a limited investment partnership. He was 25 years old.

The partnership began with seven limited partners who together contribute $105,000. Buffett, the general partner, started with one hundred dollars. The limited partners received 6% annually on their investment and 75% of the profits above this target. Buffett earned the other 25%. Over the next thirteen years, Buffett compounded money at an annual rate of 29.5%. Although the Dow declined in price five different years during this period, Buffett’s partnership never had a down year.

Buffett promised his partners that “our investments will be chosen on the basis of value not popularity” and that the partnership “will attempt to reduce permanently capital loss to a minimum.” During the partnership, Buffett not only bought minority positions but controlling interest in several public and private companies. In 1961 he bought Dempster Mill Manufacturing Company, a farm equipment manufacturer, and in 1962 he began purchasing shares in an ailing textile company called Berkshire Hathaway.

As Buffett’s reputation became more widely known, more people asked him to manage their money. As more investors came in, more partnerships were formed, until Buffett decided in 1962 to reorganize everything into a single partnership. That year, he moved the partnership office from his home to Kiewit Plaza in Omaha, where his office remains today. By 1965, the partnership’s assets had grown to $26 million.

In *1969*, Buffett decided to end the investment partnership. He found the market highly speculative and worthwhile values hard to find. During the late 1960’s the stock market was dominated by highly priced growth stocks. At the beginning of the partnership, Buffett had set a goal of outperforming the Dow by an average of ten percentage points each year. Between 1957 and 1969, he did beat the Dow, by an average of twenty-two points a year.

Berkshire Hathaway was originally called Berkshire Cotton Manufacturing, it was incorporated in 1889. Forty years later, Berkshire combined operations with several other textile mills, resulting in one of New England’s largest industrial companies. During this period, Berkshire produced approximately 25 percent of the country’s cotton needs and absorbed 1% of New England’s electrical capacity. In 1955, Berkshire merged with Hathaway Manufacturing and the name was subsequently changed to Berkshire Hathaway.

Unfortunately, the years following the merger were dismal. In less than ten years, stockholder’s equity dropped by half and loss from operations exceeded $10 million. Despite these miserable results, the Buffett partnership took control of Berkshire Hathaway in 1965. During the next twenty years, Buffett, along with Ken Chace who managed the textile group, labored intensely to turn around the New England textile mills. Results were disappointing. Returns on equity struggled to reach double digits.

By the late 1970’s, shareholders of Berkshire Hathaway began to question the wisdom of retaining an investment in textiles. Buffett made no attempt to hide the difficulties, but on several occasions explained his thinking: the textile mills were the largest employer in their area; the work force was an older age group that possessed relatively nontransferable skills; management had shown a high degree of enthusiasm; the unions were being reasonable; and, lastly, Buffett believed that some profits could be attained in the textile business. However, he made it clear that he expected the textile group to earn positive rents on modest capital expenditures. “I won’t close down a business of sub-normal profitability merely to add a fraction of a point to our corporate returns,” said Buffett. “I also feel it inappropriate for even an exceptionally profitable company to fund an operation once it appears to have unending losses in prospect. Adam Smith would disagree with my first proposition and Karl Marx would disagree with my second; the middle ground,” he explained, “is the only position that leaves me comfortable.”

As Berkshire Hathaway entered the 1980s, Buffett was coming to grips with certain realities. First, the very nature of the textile business made high returns on equity improbable. Textiles are commodities and commodities by definition have a difficult time differentiating their products from those of their competitors. The foreign competition, employing a cheaper labor force, was squeezing profit margins. Second, in order to stay competitive, the textile mills would require significant capital improvements - a prospect that is frightening in an inflationary environment and disastrous if the business returns are anemic.

Buffett was faced with a difficult choice. If he made large capital contributions to the textile division in order to remain competitive, Berkshire Hathaway would be left with poor returns on what was becoming an expanding capital base. If he did not reinvest, Berkshire’s textile mills would become less competitive with other domestic textile manufacturers. Whether Berkshire reinvested or not, foreign competition continued to have an advantage by employing a cheaper labor force.

By 1980, the annual report revealed ominous clues for the future of the textile group. That year, the textiles group lost its prestigious leadoff position in the Chairman’s Letter. By the next year, textiles were not discussed in the Letter at all. Then, the inevitable: in July of 1985, Buffett closed the books on the textile group, thus ending a business that began some one hundred years earlier.

Despite the misfortunes of the textile group, the experience was not a complete failure. First, Buffett learned a valuable lesson about corporate turnarounds: **They seldom succeed**. Second, the textile group did generate enough capital in the earlier years to buy an insurance company and that is a much brighter story.

In March of 1967, Berkshire Hathaway purchased, for $8.6 million, the outstanding stock of two insurance companies headquartered in Omaha: National Indemnity Company and National Fire & Marine Insurance Company. It was the beginning of Berkshire Hathaway’s phenomenal success story.

To appreciate the phenomenon, it is important to recognize the true value of owning an insurance company. Insurance companies are sometimes good investments, sometimes not. They are, however, always terrific investment vehicles. Policyholders, in paying premiums, provide a constant stream of cash; insurance companies invest this cash until claims are filed. Because of the uncertainty of when claims will occur, insurance companies opt to invest in liquid marketable securities - primarily stocks and bonds. Thus Warren Buffett had acquired not only two modestly healthy companies, but also a cast-iron vehicle for managing investments.

In 1967, these two insurance companies had a bond portfolio worth more than $24.7 million and a stock portfolio worth $7.2 million. In two years, the combined stock and bond portfolio of the insurance companies approached $42 million. This was a handsome portfolio for a seasoned stock picker like Buffett. He had already experienced some limited success managing the textile company’s security portfolio. When Buffett enlarged the securities account to $5.4 million. In 1967, the dollar return from investing was three times the return of the entire textile division, which had ten times the equity base of the common stock portfolio.

Berkshire Hathaway, Inc., is best understood as a **holding company**. In addition to the insurance companies, it also owns a newspaper, a candy company, a furniture store, a jewelry store, an encyclopedia publisher, a vacuum cleaner business, and a company that manufactures and distributes uniforms.

Let’s switch gears and talk about the things that Buffett considers when picking stocks. The first topic is economics. Just as Buffett puts no confidence in the prospects of market timing, neither does he commit any resources to judging economic cycles. “If Fed Chairman Ben Bernanke were to whisper to me what his monetary policy was going to be over the next two years,” says Buffett, “it wouldn’t change one thing I do.” Buffett confesses that he spends no time contemplating unemployment figures, interest rates, or currency exchanges. Neither does he let politics interfere with his investment decision-making process. According to Buffett, if the results of a political election were known beforehand, such knowledge would not change his investment approach one bit. Buffett figures that the economy, like a horse on a racetrack, will run quickly some days and slowly on others. Buffett is more interested in focusing on business fundamentals, management, and prices. However, Buffett does give a great deal of thought to inflation and how it relates to business returns. Over the past 70 years stocks have returned an average of **10.5%** annually, compared with a **5.2%** return for long-term government bonds. Inflation has averaged 3.1% during the same time period virtually wiping out the returns of bondholders.

Buffett maintains that inflation is a political not an economic phenomenon. Because there is, as yet, no permanent restraint on government spending, the constant printing of money will push inflation higher. Buffett admits that he is unsure when high inflation will return, but feels that deficit spending makes inflation inevitable. Surprisingly, Buffett is less fearful of the budget deficit than he is of the trade deficit. Because the U.S. has a very strong economic system, Buffett believes that the country can manage its budget deficit. The trade deficit worries Buffett and forms an integral part of his bias toward high inflation.

During the 1980’s Americans consumed more than one hundred percent of our production. In other words, we not only consumed goods produced in the U.S., but our appetite led us to devour foreign goods as well. In exchange for these foreign goods, we issued various claim checks, including U.S. government and corporate bonds and U.S. bank deposits. These claim checks, given to foreigners, have been growing at an incredible rate. Because we are a wealthy country, this trade deficit can go unnoticed for some time, but eventually these claim checks will be exchanged for our assets (golf courses and hotels) and our manufacturing facilities.

Buffett recognizes that the easiest way for a country to manage its deficits is to debase these claims through higher inflation. Accordingly, the faith that foreign investors have placed in the ability of the U.S. to pay future claims may be misguided. When claim checks held by foreigners rise to an unmanageable, level, the temptation to inflate might be irresistible. For a debtor country inflation is the economic equivalent of the hydrogen bomb. Few debtor countries are allowed to export debt denominated in their home currency. Because of the economic integrity of the U.S., foreigners have been willing to purchase our debt. Of course, if we use inflation to evade our debt, it won’t be only foreign holders who will suffer.

Buffett is quick to point out that these external factors - the budget deficit and the trade deficit - because of their effect on inflation, “will be the most important factors in determining whether there are any real rewards from your investments.” High rates of inflation place a burden on companies to produce a real return for their owners. In order for investors to achieve a real return, companies must earn, on equity, rates that are higher than the investors’ misery index: the sum of taxes and inflation.

Income taxes, Buffet says, can never turn a positive business return into a negative return for owners. Even if the tax rates were 90% there would be some real return for owners if the inflation rate were zero. But, as Buffett witnessed during the late 1970s when inflation rose sharply, businesses needed to clear a higher rate of return for owners. For companies earning 20% on equity, which few accomplish operating in an environment of 12% inflation, leaves little for the owners. During a period of 50% tax brackets, a company earning 20% on equity and distributing all of these earnings to owners would net a 10% return. At 12% inflation, owners would have realized just 98% of their beginning year’s purchasing power. At a 32% tax bracket, with inflation at 8%, companies earning 12% on equity return zero to their owners.

Traditional wisdom for years assumed that stocks were the perfect hedge against inflation. Investors believed that as owners, their companies could naturally pass on the cost of inflation to customers, hence preserving the owner’s investment value. Buffett disagrees, pointing out that inflation does not guarantee companies higher returns on equity. Buffett explains that there are only five ways for companies to increase their return on equity:

1. Increase asset turnover (the ratio between sales and assets).



2. Increase operating margins.

3. Pay lower taxes.

4. Increase leverage.

5. Use cheaper leverage.

Even companies requiring little in fixed assets are still hurt by inflation but hurt a little less. And the ones that are hurt the least are those with a significant amount of economic goodwill.

Economic goodwill is not the same as the more familiar accounting goodwill. Accounting goodwill is a balance sheet item; it is part of the calculation of book value. Economic goodwill is a larger but less precisely defined item that contributes to a company’s intrinsic value.

The first lesson of economic goodwill is that companies that generate above-average returns on capital are worth considerably more than the sum of their identifiable assets. For example, it has been estimated that Coca Cola’s goodwill is valued at $49 billion. As long as the reputation of the company remains intact, premium prices can be charged resulting in higher returns. Economic goodwill not only produces above-average returns on capital but its value tends to increase with inflation. Companies that are able to generate above-average returns on capital often receive a purchase price greater than their net assets.

Much of Buffett’s success can be attributed to his inactivity. Most investors cannot resist the temptation to constantly buy or sell stocks. According to Buffett, investors feel the need to purchase far too many stocks, rather than wait for that one exceptional company. **Tinkering** with a portfolio each day is **unwise**. It is easier to buy and hold outstanding businesses than to constantly switch from “far-from-great” businesses. Investors are better served if they concentrate on locating a few spectacular investments rather than jumping from one mediocre idea to another. According to Buffett, an investor should act as though he had a lifetime decision card with just twenty punches on it. With every investment decision his card is punched, and he has one fewer available for the rest of his life.

In summary, Warren Buffett says it best by saying “the fact that value investing is so simple makes people reluctant to teach it. If you’ve gone and gotten a Ph.D. and spent years learning how to do all kinds of tough things mathematically, to have to come back to this---it’s like studying for the priesthood and finding out that the ten commandments were all that you ever needed.” Buffett doesn’t worry about what others are doing. He doesn’t worry about the economy. Buffett worries about the business and when he decides to buy that business, he changes his perspective to that of the business owner. His key distinctions are simple, but that’s the deceptive thing. Simplicity is often difficult to consistently articulate, because it seems too simple. Buffett looks for simple understandable businesses, much in the same way that Peter Lynch looks for simple businesses that he can illustrate with a crayon. Buffett takes the mystery out of investing, not the hard work.

***Warren Buffett’s four most important principles***:



1. Understand the business in which you are investing. “You can’t make money in stocks unless you understand the business,” Warren Buffett is often quoted as saying. “I look for businesses within my circle of competence.” Having a large circle of competence is less important than having one with a well-defined perimeter.
2. Look for sound fundamental economics. Investors should seek out companies that have a sustainable economic advantage – a phenomenon Warren Buffett calls “a castle with a moat around it.” Take Coca Cola, for example. The company’s brand name has represented enjoyment for generations, which no competitor can buy for millions of dollars. “Share of market follows share of mind,” notes Warren.
3. Find competent leadership. Companies with a sustainable economic advantage need honest, capable and hardworking leaders to retain their lead. Berkshire Hathaway’s managers have one instruction: Widen the MOAT. That keeps the castle valuable.
4. Buy at the right price. Purchases must be made at the right price if they are to pay off.

***Peter Lynch***



Peter Lynch managed the Fidelity Magellan Fund from 1977 to 1990. A $1,000 investment in 1977 would have been worth $28,000 in 1990. This represents an annual rate of return of 29.22% over the 13 year time period. Time magazine calls Peter Lynch the nation’s number one money manager and those in the know on Wall Street acknowledge Lynch as one of the truly great investors.

Perhaps one of the most important creative strategies pursued by Lynch was something called “the Geographic Expansion Formula.” It is based on a successful company expanding either from a regional market to a national market, or a successful national company to international markets. The important application of this geographic formula is to be expanding into a market where your product is needed or desired, has no close substitutes, and is not heavily or prohibitively regulated. When Lynch initially bought Home Depot, which was a successful regional company in the south and was about to expand nationally, Lynch knew that Home Depot had a unique product that had no close substitutes in the South and since there was no close substitute nationally, Home Depot seemed like a likely candidate to be a franchise company in the many national markets where Home Depot was expanding. Buffett invested in both Gillette and Coca Cola as they were employing international expansion from proven national franchise positions in the U.S. Market. This creative approach allows an investor to find franchise companies before they have expanded geographically and the investors can reap the rewards of that franchise success in new markets with no close substitutes. The success of Boston Market, Noah’s Bagels, and Starbuck’s Coffee are just a few recent success stories that illustrate the continued value to investors of using geographic expansionism to find undervalued franchise companies.

Lynch would also change his perspective daily, trying to find new ways to identify investment opportunities. When Lynch went shopping at a mall, he looked for successful companies. He would then do research and find out what their sales were per square foot and what their operating costs were. Lynch mentions in his books that he learned about the companies that were in vogue from his children and through trips with them to shopping malls. One thing Lynch says is to never invest in any idea or business that you can’t illustrate with a crayon.

It’s no coincidence that Peter Lynch pursues many of the same strategies made famous by Graham, Templeton, and Buffett. Peter Lynch says that it is only a handful of great investments that made his career better than that of the average investor. What were these special investments? For the most part, they were all highly undervalued franchise companies with huge growth potential that came to fruition. These companies did not have any legitimate substitute products or services to compete against. Lynch has stated that it takes a long time to make money and stocks are the single greatest investment opportunity for the average investor.

Lynch also pursues what he calls a “million dollar question” strategy. This has to do with Lynch’s strategy of doing personal field research and interviewing company executives. In his interviews he would always ask the executives from the company, “Who is your greatest competition?” Lynch mentions that this question often uncovered even better investment opportunities than the company he was researching. We call it his million-dollar question, because it led to many great investment opportunities.

Lynch saw many different opportunities during his tenure with Magellan. One of these was the S&L industry. Lynch realized that regional banks often had franchise positions in their markets. He realized the same was true for regional non-public S&L’s and when any one of them went public, he would buy large positions in these institutions, because he knew that the initial offer would be kept low because the officers would want to optimize their holding percentages. All of these investments inevitably would go up at least 50 to even 90 percent within one year. The mathematical explanation is simple. By going public more asset value was being offered per dollar than could be realized in most other investments. Because of this technique used by Lynch, many regional non-public S&L’s stipulate that depositors must live within a certain geographic region of the S&L.

Lynch further used the regional expansion strategy to invest in such companies as Wendy’s, International, Dairy Queen, Shoney’s Spaghetti Wherehouse, and many others. The lesson to be learned is to recognize that a franchise is not a normal investment. For example, Value Line only rates Coca Cola a 2 on timeliness and yet their stock has averaged over 22% growth per year since 1980. Why does it continually do better than most analysts think? How can it grow so rapidly in a lackluster industry? Simple. Coca Cola is a franchise. When most investors have thought that it was overvalued it has gone even higher, what they’ve missed in their analysis is the full implications in the market place of a franchise company’s competitive advantage, growth potential, and the intrinsic value of that realized growth over time. What does this mean? It means the company is worth more because it will make more money in the future. The actual intrinsic value is based on these future earnings. Learn this lesson well.

In summary, Lynch is perhaps the greatest money manager of his generation because he has been willing to think about new and innovative ways to uncover potential investment opportunities. Remember Lynch owes his success to a relatively few investments that truly put him on the map. Therefore, owning a large portfolio is not necessarily a good strategy. Lynch always said, “owning stocks is like having children, don’t have more than you can handle.” Learn to be very selective in choosing your investments. Search for the franchise, geographically expanding companies and success is right around the corner.

***Teaching the Fundamentals of Fundamental***

***Stock Analysis***

***Introduction and Purpose***

Given today’s investment environment, there is more interest than ever in doing sound fundamental financial analysis. Fundamental analysis is that area of stock investment that uses critical data from income statements, balance sheets, cash flow analysis and historic industry numbers to determine the financial well being and future prospects of a corporation. The process of fundamental analysis has many methods and forms that are practiced by various financial analysts. There is no “one right way” to do fundamental analysis. However, the purpose of this article is to illustrate a systematic process for teaching fundamental stock analysis for the purpose of analyzing the potential investment opportunity of a publicly traded corporation. This process is part of a required semester term project taught in a financial investment class at California State University, Sacramento in the School of Business Administration. The analysis is composed of three parts with multiple steps within each component of the project. First, an ex-post ratio and DuPont analysis is used to determine the current financial well-being of the company in question. Second, a strategic financial analysis using Value Line Investment Survey data is performed using various analytical models to calculate and present key fundamental performance variables as well as identifiable nonquantitative variables. An important by-product of the strategic financial analysis is that it forces students to assess whether or not the company holds a long-term competitive advantage in its industry. Finally, the third element of the project involves developing the students’ ability to forecast a firm’s intrinsic value and culminates in a decision and presentation by the student as to the investment viability of the company analyzed. The examples used throughout this article are intended for illustrative purposes only.

***Historic Background***

Perhaps the best-known “fundamental” financial analyst was Benjamin Graham. In fact, Graham is often referred to as “the father of Fundamental Analysis” (Kahn and Milne, 1977). The Graham model was based on information contained in the balance sheet and income statement almost exclusively (Graham, Benjamin and Meredith, Spencer B., 1937). At the heart of the Graham model was the importance of not buying a stock but “investigating” a company as if you were buying the business and then buying the business at a substantial discount (Lowe, 1994). Primarily, the intrinsic value of a business is derived exclusively from the company’s earnings power. But, as Graham discovered, a company's “normal earnings” could deviate substantially from reported earnings. Graham contended that earning power should be evaluated in light of past earnings and long-term trends. According to Graham, earning power defines a company’s future prospects and ultimately potential success for stockholders. Hence, if the market price continues to advance, it is because of investor’s expectations for growth in earnings. Graham took fundamental analysis to a different level by utilizing methods that enabled an investor to search the market for bargains. Graham’s model used the net current asset variable, defined as current assets minus current liabilities minus preferred stock minus long-term debt. This “net current asset” variable was used to find those companies that were significantly undervalued or “out of favor” in the market. By purchasing stocks below the net current asset value, the investor buys a bargain because the fixed assets of the firm are purchased for practically nothing. The Graham model also takes into account the earnings per share (EPS), the expected earnings growth rate, and the current estimated yield on AAA rated corporate bonds market wide. Graham suggested that simple analytical models were the best(Lowe, 1994). “In over 50 years of Wall Street experience and study, I have never seen dependable calculations made about common stock values, or related investment policies, which went beyond simple arithmetic or the most elementary algebra. 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, and usually also to give speculation the deceptive guise of investment (Kahn and Milne, 1977).” The student project discussed here requires a complete Graham analysis as part of the third and final step and is illustrated in Table 9.

There have been other fundamental investment experts who have followed Graham including Warren Buffett, John Templeton, and Peter Lynch who have all been successful using variations of the Graham model. All concede that finding undervalued companies remains a possibility even in bull markets. In today’s environment the market is laden with target rich investment opportunities. These other variations are also presented to the students in lecture form but are not part of the excel spreadsheet analysis.

***The Importance of Fundamental Ratio Analysis***

At the core of solid fundamental investment analysis is the ability to calculate, analyze, and interpret the meaning of financial ratios. Ratios can be characterized as diagnostic tools that are used to discern changing patterns and potential trouble spots that may arise in the future business life of a firm. Ratios can best be described as a way of standardizing the performance of key financial variables found on the balance sheet and income statement. For example, one of the key measures of a firm’s liquidity is the current ratio. By definition, the current ratio is current assets divided by current liabilities. Preferably the firm would like this ratio to be greater than one. Why? Because a ratio of 2.0 suggests that for every dollar of current liability we have two dollars in current assets to cover it. Taken in isolation, this ratio has little meaning. It becomes meaningful when it is compared on a historical basis and also compared to industry averages. Therefore, the first step in the fundamental stock analysis project is to do a complete ratio analysis of the prospective investment company.

# The Fundamental Stock Analysis Process-Student Term Project

***Part A: Ex Post Ratio and DuPont Analysis***

The term project undertaken by the students begins with the analysis of both balance sheet and income statement data for a selected company. This information is downloaded from the company’s Annual Reports as presented by the Security and Exchange Commission, which can normally be found at the company’s home web page. This data is compiled for the last three years and the students may need to rearrange the information into the excel spreadsheets using standardized balance sheet and income statement categories provided by the instructor. The excel spreadsheets are the basis for the student to complete a full ex-post ratio and DuPont analysis on the firm that they analyze during the course of the semester. Throughout this paper, we will use the Coca Cola Company (Coke) as our example to illustrate the process. Tables 1 and 2 summarize the financial statements for the last three years for the Coca Cola Company. In addition, the student also compiles financial data for their company’s nearest competitor. In this case Pepsi information would be downloaded.

#### PLACE TABLES 1&2 HERE

#### Fundamental Ratio Analysis

#### The second step of the analysis requires the student to do a complete ratio analysis based on the balance sheet and income statement data presented in Table 1 and 2. These tables represent the ratio analysis input sheets and are the primary input data that in turn generates all other ex-post analysis. Once the figures are entered on the ratio analysis input sheet, the industry average spreadsheets and the DuPont analysis are automatically generated. The student begins the ex post ratio analysis using integrative Excel spreadsheets that calculate the necessary data (see Table 3). The ratio analysis has four major categories. The first category deals with the relative liquidity of the firm referred to as the solvency ratios in Table 3. The liquidity of a firm is measured by its ability to satisfy its short-term obligations as they come due. Hence, liquidity measures the relative ease of paying bills. The basic measures of liquidity used in our project

#### analysis are the quick ratio, current ratio, cash ratio, and net working capital.

The second category of ratios calculated for the project analysis is the efficiency ratios. Efficiency ratios are used to measure the speed with which various accounts are converted into sales or cash. These ratios also help to measure the relative efficiency of a firm in utilizing its assets. These ratios include the average collection period, inventory turnover, receivable turnover, fixed asset turnover ratio, and the total asset turnover ratio.

The third category of ratio analysis deals with the indebtedness of the firm, i.e. financial leverage ratios. A firm’s debt position can be assessed by looking at both its degree of indebtedness and its ability to pay its debts. The debt position of a firm indicates the amount of other people’s money being used in an attempt to generate profits. In general, the investor is most concerned with long-term debts, since these commit the firm to paying interest over the long run. These ratios measure the degree of financial leverage employed by the firm, which magnifies risk and return. The ratios calculated in this category include the total debt ratio, the debt to equity ratio, long-term debt ratio, and the times interest earned ratio.

The fourth category of ratios analyzes profitability. As a group, these ratios allow the investor to evaluate the firm’s earnings with respect to a given level of sales, assets, equity investment, and share value. These ratios include the gross profit margin, the net profit margin, return on total assets, return on equity, and earnings per share as well as the price to earnings ratio.

INSERT TABLE 3 ABOUT HERE

The Excel spreadsheet is set up with logic statements to make assessments regarding the time-series trend and an assessment of the most recent year in comparison to the major competitor in the industry. The remaining columns in Table 3 provide the cross-sectional analysis and time series analysis. The cross-sectional analysis allows a direct comparison to the chosen competitor and the time-series analysis allows for a trend comparison of the ratios over the past three years. The ratio analysis of the Coca Cola Company (Table 3), indicates a superior company over the last three years. While the liquidity of the company suggests room for improvement in comparison to Pepsi, the majority of the activity, debt, and profitability ratios point toward an extremely strong financial condition.

Coke’s relative liquidity is substandard when compared with Pepsi. For example, the current ratio has a value of .95 for 2008 in comparison to the Pepsi average of 1.02. In addition, Coke’s quick ratio also indicates less liquidity than the Pepsi average (.77 versus 1.02) with a downward then an upward trend over the last three years. Therefore, Coke’s liquidity position could be characterized as substandard in comparison to Pepsi.

The efficiency ratios reveal a second dimension of the Coca Cola Company. These ratios indicate the relative efficiency with which the company uses investor’s assets. The average collection period suggests that Coke does a slightly better job of collecting their outstanding receivables when compared to Pepsi (41.38 days versus 42.4 days). Also, the inventory turnover ratio measures how rapidly the company “turns over” or uses dollars invested in inventory and converts them to sales. In the case of Coke, the inventory turnover ratio indicates a downward trend over the three-year period. Further, in 2008, Coke’s inventory turnover ratio was superior when compared to Pepsi’s. The inventory turnover ratio for 2008 was 13.00, in comparison to a Pepsi average of 12.30. Likewise, the three-year trend indicates a slight decrease in inventory turnover. Other activity ratios indicate similar results when compared to Pepsi. For example, the Fixed Asset Turnover value is more favorable for Coke (3.51) versus Pepsi (1.61. However, the Total Asset Turnover value is lower (.69) when compared to Pepsi (1.13).

The third group of ratios deals with the use of debt in the capital structure as well as the ability to meet required interest payments from operating income. For Coke, all total debt ratios indicate a favorable assessment based on both the cross-sectional and time-series analysis. The Equity ratio for 2008 is slightly substandard when compared to Pepsi (.48 versus .50).

The fourth category of ratios deals with those that are most important to investors, i.e. profitability ratios. The gross profit margin is clearly superior in comparison with the Pepsi average (.64 versus .18). It is also obvious that the Coca Cola Company does a superior job of cost cutting resulting in higher operating profits when compared to Pepsi. Further, the net profit margin indicates consistent performance on the part of Coke. Coke has averaged 21% net return on Net Operating Income for the last three years. Also, the return on total assets ratio indicates favorable performance for the Coca Cola Company. The 2008 return on total assets was equal to 15% compared to 16% for Pepsi. Further, Coke’s return on equity has shown stable and consistent levels with returns of 20%, 28%, and 30% for the last three years. Finally, Coke’s EPS has shown a steady increase over the three year period from $2.19 to $2.95.

DuPont Analysis

As previously stated, no one ratio gives a complete picture of the financial stability of the company. All ratios must be used in assessing the financial viability of the firm. The DuPont system is used at this point in the analysis to consider the impact of various balance sheet and income statement components in the formation of return on equity.

An essential part of the project analysis is to construct DuPont charts. The DuPont analysis helps to complete the diagnosis of financial stability in concert with the ratio analysis. The DuPont analysis provides a framework for dissecting the firm’s financial statements in an effort to further diagnose trouble spots in the overall performance of the firm. The DuPont analysis begins with information from the balance sheet and income statement provided in Tables 1 and 2 in calculating key performance and efficiency ratios. These ratios are then used to generate the values for return on total assets and most importantly, the return on equity. The key value for the return on equity is a function of the return on total assets and the financial leverage multiplier, which measures the extent the corporation uses debt in its total capital structure. The financial leverage multiplier, in effect, measures the magnification effect of using other people’s money.

#### INSERT TABLES 4, 5, AND 6 ABOUT HERE

As an example, the 2008 DuPont analysis for Coca Cola Company (Table 6) allows the student to consider all the “parts” that go into the return on equity value. The 2008 return on equity of 24.08% is a function of two components, the return on total assets (ROA) and the financial leverage multiplier (FLM). These two components, when multiplied together, yield the return on equity. The strength of the DuPont system is found in its’ ability to dissect and isolate financial areas of under performance/concern which ultimately leads to a quicker solution of any internal problems. Notice in Table 5, for example, Coke has a return on equity that is slightly below Pepsi. The DuPont system can pinpoint the general cause quickly. In this example the cause of Coke’s sub-par performance is due to the lower Return on Total Assets, which comes from having a lower Total Asset Turnover than Pepsi. Management can then use this information to examine what is causing this lower turnover rate.

***Part B: Strategic Financial Analysis***

Strategic financial analysis is comprised of both a quantitative and non-quantitative analysis. The first step requires the student to input data from the Value Line Investment Survey into the Value Line excel spreadsheet for analysis (See Table 7). This quantitative data will be used in the forecast of the future performance and intrinsic value determination in the final step of the student project. This data sheet reflects both historical and estimated financial data. In addition, various ratings are reported based on timeliness, safety, and technical investment prospects. Once this data is inputted, the Value Line excel spreadsheet provides a number of calculations that are used to calculate intrinsic values of the firm in the final part of this project. The key calculations from the Value Line spreadsheet (Table 7) are the value of owner’s cash flow, the average growth in owner’s cash flow, and the value added. These key calculations are used as the basis for the ex ante analysis performed in the final step of the student project.

Value Line Investment Cash flow Projections

The owner’s cash flow value is determined by taking net income plus depreciation and subtracting capital expenditures. This value represents the net cash flow to the shareholders once capital expenditures are subtracted. This value is calculated for each of the six years starting in 2003. The percentage growth in owner’s cash flow is then calculated for each year and an average for the entire six-year period is provided. The average growth of the owner’s cash flow is then used to forecast future cash flows to determine the firm’s expected intrinsic value. In addition, the Value Line data sheet provides the value added calculation. This value represents the average increase in share price for each $1 retained by the firm over the six-year time period.

INSERT TABLE 7 ABOUT HERE

Table 7 shows the results of the electronic download of Value Line data inputs for the Coca Cola Company for the years 2003 through 2008. The Coca Cola Company is an excellent example of a fundamentally sound, long-term growth company that continues to return its shareholders between 25-30% per year. The Coca Cola Company also meets the criteria of a “franchise product” company. A franchise product company is simply one whose product is unique with few substitutes, has a high demand, can sustain a long-term competitive advantage, and has little or no government regulation. In addition, Coca Cola continues to be an aggressive cost cutter as reflected by a continual increase in the operating profit margin over the years.

Non-Quantitative Strategic Analysis

The strategic analysis also requires the student to consider the non-quantitative factors that contribute to the overall fundamental soundness of the company. The student investigation includes an analysis and assessment of company strengths, weaknesses, opportunities, and threats. In addition, an environmental scan of the industry is conducted in order to determine who the competition is, what the relative market share is and could be, and the degree to which the company has a sustainable competitive advantage in both domestic and international markets.

The student is required to consider these non-quantitative factors in the final analysis of whether the company should be a prospective investment. These factors include but are not limited to determining if the company has and maintains a “monopoly” type product(s), can sustain a long-term competitive advantage with their products over the next 10-20 years. Here, the student will look at the quality of products, the efficiency (cost) of making these products, along with the ability of the firm to provide new and innovative products. In this process, the student is normally able to identify the distinctive competencies of the firm being analyzed as well and the durability of competitive advantage. This requires the student to do a great deal in the area of product, brand, and sales analysis along with the financial analysis already discussed.

The non-quantitative analysis of Coke reveals that the company has many strengths and opportunities with minor weaknesses and threats. First, Coke is clearly a franchise product - this is its’ major strength. The ability to get the product to the customer at the least cost, when they want it is a strength that is surpassed only by Cokes advertising prowess. Internationally, Coca Cola has a major presence in both the Chinese and Indian markets with distribution networks that have been in place for a number of years. Cokes relative success in these markets have helped to generate a 9.1% sales growth rate over the last six years.

# Part C: Forecasting the Firm’s Intrinsic Value

This part of the project requires the determination of an intrinsic value for the company. The intrinsic value for the company is based on projected “owners’ cash flow” over the next ten years. The six year historic data from the strategic financial analysis step as presented in Table 7 is used to determine a number of key forecasting variables for the intrinsic value model. The key input variables from Table 7 are owners’ cash flow, growth in owners’ cash flow, and the six-year average growth rate in owners’ cash flow.

Forecasting Intrinsic Value

The “owners’ cash flow” value for the most recent year is used as a beginning variable for the ten-year intrinsic value forecast. The average growth rate in owner’s cash flow becomes the next key variable in projecting future cash flows. The 5-year average cash flow growth rate is used to project the annual cash flow values over the next 10 years that will ultimately be discounted and used in the determination of the company’s intrinsic value. For example, the Coca Cola Company has a five-year average growth rate of 6.2% (Table 7). This value is then used as the 10-year growth rate for cash flows that are used in determining the intrinsic value under a “most likely”, “pessimistic” and “optimistic” scenario as summarized in Table 8.

INSERT TABLE 8 ABOUT HERE

The total intrinsic value is composed of two sums. The first calculation for intrinsic value is the discounted ten-year cash flows summed and discounted at the investor specified discount rate. In this case, 15% reflects the minimum acceptable rate of return. The second component of intrinsic value is the residual value of cash flows beyond ten years with an assumed growth rate of 4% per year. This residual is also discounted at 15%. For example, under the most-likely scenario (Table 8) the total intrinsic value is approximately $70 billion. Once this total intrinsic value is determined, it is divided by the number of shares outstanding, in order to calculate the intrinsic value per share ($30.34). This value is then compared to the market price to determine if the stock is selling at a discount. With a current market price of $44, it is clear that Coke is not selling at a bargain price. Table 8 presents three different scenarios; a most likely, pessimistic, and optimistic forecast. The most likely scenario is based on a growth rate in owner’s cash flow of the calculated actual growth of 6.2%. The pessimistic and optimistic scenarios represent a plus and minus five percent either added to or subtracted from the 6.2% average. The Table 8 statistics are summarized in the last value for each scenario, the intrinsic/price per share ratio. This ratio expresses the intrinsic value received for each dollar invested. As can be seen from the data, even the optimistic scenario yields a ratio of .98, which states that for every dollar invested, the intrinsic value is only $.98.

# Graham Model

At this stage of the project, the student prepares results based on the historic Ben Graham model. The Graham model is broken down into two groups of criteria, Group A and Group B. Group A criteria come mostly from Income Statement data. For example, the first criterion in Group A is the earnings yield. The earnings yield is defined as earnings per share divided by the current market price per share. According to the Graham model, you can receive 1, ½, or 0 points depending on the magnitude of the earnings yield in relation to the yield on AAA rated corporate securities.

INSERT TABLE 9 ABOUT HERE

As can be seen from the “results” matrix at the bottom of the Table, Coke does not pass the required Graham criteria in order to signal a “buy”. In this example, the yield on AAA rated securities is 2.86%. The earnings yield for Coke is $3.06/$42.88 or 7.14%. The threshold for 1 point is two times the 2.86%, which is 5.72%. Coke’s earnings yield is greater at 7.14%. Therefore, 1 point is granted for this first criterion. The only other criterion that receives one point is number 4, the dividend yield. The dividend yield (dividend per share/price per share) is calculated to be 3.5%. The threshold for receiving one point is if the dividend yield is equal to or greater than 2/3 of the yield on AAA rated corporate bonds (1.92% in this example). Since the actual dividend yield is greater than 1.92%, Coke receives one additional point in Group A. In order to signal a “buy” according to the Graham model, Coke would need 3 ½ points from both Group A and Group B. Coke has only 4 total points (2 from each Group) and does not pass the Graham model.

Buffet Model

The students must also utilize the Warren Buffet fundamental analysis for comparison purposes. The Buffett model determines the average compounded rate of return for a ten-year period using two different methods. The first method treats the stock “as if” it were a bond to compute the average compounded rate of return (ACRR). The expected EPS is based on the average return on equity (ROE) on retained earnings. The second method of calculating the average compounded rate of return is based on the projected growth in EPS. This process projects the future share price based on a projected EPS value in ten years. This projected price is then used to determine the annual growth rate from the current price today.

INSERT TABLE 10 ABOUT HERE

Table 10 presents the results of the buffet model for our example. Based on this analysis Coke could be expected to yield 17.15% per year based on its dividend payout and projected earnings per share. In our example, the current price used is $42.88, which grows to $97.65 in ten years. The calculated growth rate is 8.58% per year. This represents the annual compounded rate of return over the 10 year period.

ROE Model

The final comparative model the students prepare is the ROE Model. The purpose of the ROE Model is to present an estimation of the future return on equity for a ten year period. This model is based on using a range in P/E ratios that come directly from the Value Line data. Table 11 presents the projected return on equity values over the next ten years. In our example, Coke has a potential range in ROE values of 16.88% (with a low P/E of 17.6), or 19.48% (with a high P/E of 22.6). Based on the 15% investor return expectation, this analysis would result in a positive buy decision.

#### INSERT TABLE 11 ABOUT HERE

As the final step, the student is expected to create a presentation that summarizes the results from the ex-post DuPont analysis from Part A, the strategic financial analysis from Part B, and the comparative presentation of the Ex-ante Intrinsic Value Analysis, Historic Graham Model, Buffet Model and ROE Projections Analysis from Part C. Table 12 is an example of the presentation of the summary statistics and recommendations the student is expected to form for the class presentation.

INSERT TABLE 12 ABOUT HERE

Using 15% as our required rate of return, the different models present different results. First, the ex-post DuPont analysis indicates that for the last three years Coke has returned to their shareholder an average return on investment of 29.45%. However, based on the calculated intrinsic values for the three different scenarios, it appears that the current price for Coke is too high to consider as a viable investment. The decision based on the intrinsic value calculations would lead to a “no buy” decision. In addition, the Graham model also substantiates a “no buy” decision in that it yields only four points out of a required seven to indicate a buy. Further, the Buffett model suggests that the annual compounded rate of return is only marginal with a value ranging from 8.58% to 17.15%. This would also suggest only a marginal rate of return considering our required rate of return is a 15% minimum. Finally, the ROE projections for Coke for the next ten years are also marginal with a range from 16.88% to 19.48%. Therefore, based on the summary data in Table 12, the recommendation to purchase Coke at the price of $42.88 would not be made.

***Conclusions***

This paper has presented a systematic approach, using Excel spreadsheets, for doing fundamental analysis. The process presented is composed of three major parts. First, a complete ratio analysis based on historic financial statements along with a DuPont Analysis. The second part is a strategic analysis that provides a Value Line Data computed cash flow projection and an identification of the company’s strengths, weaknesses, opportunities and threats. The third part of the project focused on forecasting an intrinsic value of the firm. The forecast results in a total value for the firm today based on future cash flows that are compounded at various growth rates, the total intrinsic value of the firm is then divided by the number of outstanding shares to determine the intrinsic value per share. This value is then compared to the market price to determine if the stock is currently over-valued or under-valued.

While the process appears to be extensive, the Excel spreadsheets tend to make short work of the analysis. In addition, copies of the Excel spreadsheet are available from the authors upon request.

***Table 1: Financial Statements***

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| **Balance Sheet** | **2008** | **2007** | **2006** |
| Year Ending December 31, (In Millions) |  |  |  |
| **ASSETS** |  |  |  |
| **CURRENT ASSETS** |  |  |  |
| Cash and cash equivalents | $4,581 | $4,093 | $2,440 |
| Marketable securities | $260 | $215 | 150 |
| Trade accounts receivable, less allowances | $3,713 | $3,317 | 2,587 |
| of $56 and $63, respectively |  |  |  |
| Inventories | $2,485 | $2,220 | 1,641 |
| Prepaid expenses and other assets | $2,530 | $2,260 | 1,623 |
| **TOTAL CURRENT ASSETS** | $13,569 | $12,105 | 8,441 |
| **INVESTMENTS** |  |  |  |
| Coca-Cola Enterprises Inc. | 2,042 | 1,637 | 1,312 |
| Coca-Cola Hellenic Bottling Company S.A. | 1,847 | 1,549 | 1,251 |
| Coca-Cola FEMSA, S.A.B. de C.V. | 1,188 | 996 | 835 |
| Coca-Cola Amatil Limited | 790 | 806 | 817 |
| Other, principally bottling companies | 2,527 | 2,301 | 2,095 |
| Cost method investments, principally | 490 | 488 | 473 |
| bottling companies |  |  |  |
| **TOTAL INVESTMENTS** | 8,180 | 7,777 | 6,783 |
| **OTHER ASSETS** | 2,625 | 2,675 | 2,701 |
| PROPERTY, PLANT AND EQUIPMENT net | 9,200 | 8,493 | 6,903 |
| **TRADEMARKS WITH INDEFINITE LIVES** | 5,200 | 5,153 | 2,045 |
| **GOODWILL** | 4,820 | 4,256 | 1,403 |
| **OTHER INTANGIBLE ASSETS** | 3,200 | 2,810 | 1,687 |
| **TOTAL ASSETS** | $46,794 | $43,269 | $29,963 |
| LIABILITIES AND SHAREOWNERS EQUITY |  |  |  |
| **CURRENT LIABILITIES** |  |  |  |
| Accounts payable and accrued expenses | $7,740 | $6,915 | $5,055 |
| Loans and notes payable | 6,215 | 5,919 | 3,235 |
| Current maturities of long-term debt | 150 | 133 | 33 |
| Accrued income taxes | 230 | 258 | 567 |
| **TOTAL CURRENT LIABILITIES** | 14,335 | 13,225 | 8,890 |
| **LONG-TERM DEBT** | 4,200 | 3,277 | 1,314 |
| **OTHER LIABILITIES** | 3,340 | 3,133 | 2,231 |
| **DEFERRED INCOME TAXES** | 2,400 | 1,890 | 608 |
| **TOTAL LIABILITIES** | $24,275 | $21,525 | $13,043 |
| **SHAREOWNERS EQUITY** |  |  |  |
| Common stock, $0.25 par value; Authorized 5,600 shares | 900 | 880 | 878 |
| Issued 3,519 and 3,511 shares, respectively |  |  |  |
| Capital surplus | $7,500 | $7,378 | $5,983 |
| Reinvested earnings | $39,985 | $36,235 | $33,468 |
| Accumulated other comprehensive income | $650 | $626 | (1,291) |
|  |  |  |  |
| Treasury stock, at cost 1,201 and 1,193 | (26,516) | (23,375) | (22,118) |
| shares, respectively |  |  |  |
| **TOTAL SHAREOWNERS EQUITY** | 22,519 | 21,744 | 16,920 |
| **TOTAL LIABILITIES AND SHAREOWNERS EQUITY** | 46,794 | $43,269 | $29,963 |

***Table 2: Financial Statements (Continued)***

|  |  |  |  |
| --- | --- | --- | --- |
| Income Statement |  |  |  |
| Year Ended December 31, | **2008** | **2007** | **2006** |
| (In millions except per share data) |  |  |  |
| **NET OPERATING REVENUES** | $ 32,300 | $28,857 | $24,088 |
| Cost of goods sold | 11,648 | 10,406 | 8,164 |
| **GROSS PROFIT** | 20,652 | 18,451 | 15,924 |
| Selling, general and administrative expenses | 12,251 | 10,945 | 9,431 |
| Other operating charges | 348 | 254 | 185 |
| **OPERATING INCOME** | 8,053 | 7,252 | 6,308 |
| Interest income | 250 | 236 | 193 |
| Interest expense | 510 | 456 | 220 |
| Equity income net | 752 | 668 | 102 |
| Other income (loss) net | 180 | 173 | 195 |
| Gains on issuances of stock by equity method |  |  |  |
| investees |  |  |  |
| **INCOME BEFORE INCOME TAXES** | 8,725 | 7,873 | 6,578 |
| Income taxes | 1,920 | 1,892 | 1,498 |
| **NET INCOME** | $6,806 | $5,981 | $5,080 |
| **BASIC NET INCOME PER SHARE** | $2.95 | $2.59 | $2.16 |
| **DILUTED NET INCOME PER SHARE** | $2.94 | $2.57 | $2.16 |
| **AVERAGE SHARES OUTSTANDING** | 2,310 | 2,313 | 2,348 |
| Effect of dilutive securities | 15 | 18 | 2 |
| **AVERAGE SHARES OUTSTANDING ASSUMING DILUTION** | 2,325 | 2,331 | 2,350 |
|  |  |  |  |

***Table 3: Averages vs. Competitor (Pepsi)***

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **2006** | **2007** | **2008** | **Pepsi** | **Cross -** | **Time -** |
| **Ratios** | **Formula** |  | **Sectional** | **Series** |
| **SOLVENCY** |  |  |  |  |  |  |  |
| **Quick (acid test)** | **Current Assets - Inventory/Current Liabilities** | 0.77 | 0.75 | 0.77 | 1.02 | Bad | Warning |
| **Current Ratio** | **Current Assets/Current Liabilities** | 0.95 | 0.92 | 0.95 | 1.31 | Bad | Variable |
| **Cash Ratio** | **Cash/Current Liabilities** | 0.58 | 0.58 | 0.60 | 0.20 | Good | Warning |
| **Net Working Capital to CL** | **NWC/Current Liabilities** | -0.05 | -0.08 | -0.05 | 0.31 | Bad | Variable |
| EFFICIENCY |  |  |  |  |  |  |  |
| **Average Collection Period** | **Accounts Receivable/(Sales / 360)** | 38.66 | 41.38 | 41.38 | 42.40 | Good | OK |
| **Inventory Turnover** | **Total Revenues/Inventory** | 14.68 | 13.00 | 13.00 | 12.30 | Good | Variable |
| **Receivable Turnover** | **Total Revenues/Accounts Receivable** | 9.31 | 8.70 | 8.70 | 6.70 | Good | Variable |
| **Fixed Asset Turnover** | **Total Revenues/Fixed Assets** | 3.49 | 3.40 | 3.51 | 1.61 | Good | Variable |
| **Total Asset Turnover** | **Total Revenues/Total Assets** | 0.80 | 0.67 | 0.69 | 1.13 | Bad | Variable |
| **FINANCIAL LEVERAGE** |  |  |  |  |  |  |  |
| **Total Debt Ratio** | **Total Debt/Total Assets** | 0.44 | 0.50 | 0.52 | 0.53 | Good | Variable |
| **Debt-Equity Ratio** | **Total Debt/Total Equity** | 0.08 | 0.15 | 0.19 | 1.00 | Good | Warning |
| **Equity Ratio** | **Total Equity/Total Assets** | 0.56 | 0.50 | 0.48 | 0.50 | Good | Warning |
| **Long-term Debt Ratio (LTD/TA)** | **Long-term Debt Ratio (LTD/TA)** | 0.04 | 0.08 | 0.09 | 0.12 | Good | OK |
| **Times Interest Earned** | **EBIT/Total Interest Payments** | 28.67 | 15.90 | 15.79 | 32.00 | Bad | Warning |
| **PROFITABILITY** |  |  |  |  |  |  |  |
| **Gross Profit Margin (GPM)** | **Gross Profits/Net Operating Income** | 0.66 | 0.64 | 0.64 | 0.18 | Good | Variable |
| **Net Profit Margin (NPM)** | **Net Profits/Net Operating Income** | 0.21 | 0.21 | 0.21 | 0.14 | Good | Variable |
| **Return on Total Assets (ROA)** | **Net Income/Total Assets** | 0.17 | 0.14 | 0.15 | 0.16 | Bad | Variable |
| **Return on Equity (ROE)** | **Net Income/Total Equity** | 0.30 | 0.28 | 0.30 | 0.33 | Bad | Variable |
| **Earnings Per Share (EPS)** | **Net Profit/Number of Shares Outstanding** | $2.19 | $2.58 | $2.95 |  |  |  |

***Table 4: DuPont 2006***



***Table 5: DuPont 2007***



***Table 6: DuPont 2008***



***Table 7: Value-Line Data Inputs***

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **SYMBOL:** | **KO** |  |  |  |  | |  |
| **COMPANY**: | **COCA COLA** |  |  |  |  | |  |
| **' BETA:** | **0.55** |  |  |  | **PRICE: $42.88** | |  |
|  |  |  |  |  |  | |  |
|  |  |  |  |  |  | |  |
|  | **2003** | **2004** | **2005** | **2006** | **2007** | **2008** | | |
|  |  |  |  |  |  |  | | |
| **SALES PER SHARE** | **$8.62** | **$9.12** | **$9.75** | **$10.39** | **$12.45** | **$14.00** | | |
| **CASH FLOW PER SHARE** | **$2.31** | **$2.45** | **$2.59** | **$2.81** | **$3.08** | **$3.60** | | |
| **EARNINGS PER SHARE** | **$1.95** | **$2.06** | **$2.17** | **$2.37** | **$2.57** | **$3.06** | | |
| **DIVIDENDS PER SHARE** | **$0.88** | **$1.00** | **$1.12** | **$1.24** | **$1.36** | **$1.52** | | |
| **CAP'L SPENDING/SHARE** | **$0.33** | **$0.31** | **$0.38** | **$0.61** | **$0.71** | **$0.80** | | |
| **BOOK VALUE PER SHARE** | **$5.77** | **$6.61** | **$6.90** | **$7.30** | **$9.38** | **$10.80** | | |
| **OUTSTANDING SHARES** | **2441.5** | **2409.3** | **2369.0** | **2318.0** | **2318.0** | **2310.0** | | |
| **AVG ANN'L P/E RATIO** | **22.6** | **22.6** | **19.7** | **18.5** | **21** | **17.6** | | |
| **AVERAGE P/E RATIO** | **20.3** |  |  |  |  |  | | |
| **AVG ANN'L DIV'D YIELD** | **2.00%** | **2.20%** | **2.60%** | **2.80%** | **2.50%** | **2.80%** | | |
| **SALES ($MILL)** | **$21,044** | **$21,962** | **$23,104** | **$24,088** | **$28,857** | **$32,300** | | |
| **OPERATING MARGIN** | **31.6%** | **32.2%** | **30.8%** | **31.8%** | **30.0%** | **33.0%** | | |
| **DEPRECIATION ($MILL)** | **$850** | **$893** | **$932** | **$938** | **$1,163** | **$1,175** | | |
| **NET PROFIT ($MILL)** | **$4,790.00** | **$5,014.00** | **$5,196.00** | **$5,568.00** | **$5,981.00** | **$7,125.00** | | |
| **INCOME TAX RATE (%)** | **21.1%** | **24.5%** | **23.5%** | **22.4%** | **24.0%** | **22.0%** | | |
| **NET PROFIT MARGIN (%)** | **22.8%** | **22.8%** | **22.5%** | **23.1%** | **20.7%** | **22.0%** | | |
| **WORKING CAP'L ($MILL)** | **$510** | **$1,123** | **$414** | **-$449** | **-$1,120** | **-$475** | | |
| **LONG-TERM DEBT(MILL)** | **$2,517** | **$1,157** | **$1,154** | **$1,314** | **$3,277** | **$2,800** | | |
| **SHAREHOLDER EQUITY ($MILL)** | **$14,090** | **$15,935** | **$16,355** | **$16,920** | **$21,744** | **$24,985** | | |
| **ROE** | **34%** | **31%** | **32%** | **33%** | **28%** | **29%** | | |
| **AVERAGE ROE** | **31%** |  |  |  |  |  | | |
| **DIVIDEND PAYOUT RATIO** | **48%** | **45%** | **48%** | **52%** | **52%** | **49%** | | |
|  |  |  |  |  |  |  | | |
| **CALCULATIONS:** |  |  |  |  |  |  | | |
| **PRICE PER SHARE** | **$44.07** | **$46.56** | **$42.75** | **$43.85** | **$53.97** | **$53.86** | | |
| **OWNERS CASH FLOW ($MILL)** |  |  |  |  |  |  | | |
| **(NI + DEP - CAP'L EXP)** | **$4,834.31** | **$5,160.12** | **$5,227.78** | **$5,092.02** | **$5,498.22** | **$6,452.00** | | |
| |  | | --- | | **ANNUAL CF GROWTH RATE** | |  | **6.74%** | **1.31%** | **-2.60%** | **7.98%** | **17.35%** | | |
| **5 YEAR AVG CF GROWTH** | **6.2%** |  |  |  |  |  | | |
|  |  |  |  |  |  |  | | |
| |  | | --- | | **ANNUAL SALES GROWTH** | |  | **4.41%** | **5.12%** | **4.27%** | **19.83%** | **12.06%** | | |
| **5 YR AVG SALES GROWTH** | **9.1%** |  |  |  |  |  | | |
| **VALUE ADDED** |  | **$ 0.91** | **$(2.10)** | **$0.06** | **$3.92** | **$9.36** | | |
| **AVG. VALUE ADDED** | **$2.43** |  |  |  |  |  | | |
| **OWNER'S CF PER SHARE** | **$1.98** | **$2.14** | **$2.21** | **$ 2.20** | **$2.37** | **$2.79** | | |
|  |  |  |  |  |  | |  | | |

Table 8: Intrinsic Values

Most Likely Scenario: (In Millions $)

|  |  |
| --- | --- |
| PRESENT VALUE OF RESIDUAL | **$27,414** |
| TOTAL INTRINSIC VALUE | **$70,076** |
| NUMBER OF SHARES | **2,310,000,000** |
| **INTRINSIC VALUE PER SHARE** | **$30.34** |
| **INTRINSIC/PRICE PER SHARE** | **.71** |

Pessimistic Scenario: (In Millions $)

|  |  |
| --- | --- |
| PRESENT VALUE OF RESIDUAL | **$16,922** |
| TOTAL INTRINSIC VALUE | **$50,999** |
| NUMBER OF SHARES | **2,310,000,000** |
| **INTRINSIC VALUE PER SHARE** | **$22.08** |
| **INTRINSIC/PRICE PER SHARE** | **.51** |

**Optimistic Scenario: (In Millions $)**

|  |  |
| --- | --- |
| PRESENT VALUE OF RESIDUAL | **$43,435** |
| TOTAL INTRINSIC VALUE | **$97,217** |
| NUMBER OF SHARES | **2,310,000,000** |
| **INTRINSIC VALUE PER SHARE** | **$42.09** |
| **INTRINSIC/PRICE PER SHARE** | **.98** |

## Table 9: Graham Model

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | **Ticker Symbol: KO** |  |  |  |
|  | **COCA COLA** | **GRAHAM ANALYSIS** | | |  |
|  |  |  |  |  |  |
| Variables |  | Values |  |  |  |
|  | Current Price | **$42.88** |  |  |  |
|  | **AAA Yield** | 2.86% |  |  |  |
|  | **Average P/E over last 3 Years** | 19.03 |  |  |  |
|  | **Average P/E over last 8 Years** | 20.33 |  |  |  |
|  | **Net Current Assets Per Share** | -2.15 |  |  |  |
|  | **Total Debt Per Share** | $10.51 |  |  |  |
|  |  |  |  |  |  |
| Group A |  | Values |  | Points |  |
|  |  |  |  |  |  |
| #1 | Earnings / Price | 7.14% |  | 1 |  |
|  |  |  |  |  |  |
| #2 | Price / Earnings | 17.6 |  | 0 |  |
|  |  |  |  |  |  |
| #3 | Price / Book | 4.99 |  | 0 |  |
|  |  |  |  |  |  |
| #4 | Dividends / Price | 3.5% |  | 1 |  |
|  |  |  |  |  |  |
| #5 | Price / Net Current Assets Per Share | -$19.95 |  | 0 |  |
|  |  |  |  |  |  |
| Group B |  | Values |  | Points |  |
|  |  |  |  |  |  |
| #6 | Current Ratio | 0.95 |  | 0 |  |
|  |  |  |  |  |  |
| #7 | Total Debt / Equity | 0.19 |  | 1 |  |
|  |  |  |  |  |  |
| #8 | Total Debt / Net Current Assets | -4.89 |  | 0 |  |
|  |  |  |  |  |  |
| #9 | Growth For Last 10 Years | 8.00% |  | 0 |  |
|  | Growth For Last 5 Years | 6.20% |  |  |  |
|  |  |  |  |  |  |
| #10 | Number of Earnings Declines | 0 |  | 1 |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |



## Table 10: Buffett Model



|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | Table 11: Projected ROE Based on P/E Ratios | | | |  |
|  |  | Current Price | $42.88 |  |  |  |  |
|  |  | ROE | 31.0% |  |  |  |  |
|  |  | Initial Book Value | $8.61 |  |  |  |  |
|  |  | Payout Ratio | 49.0% |  |  |  |  |
|  |  | P/E - High | 22.6 |  |  |  |  |
|  |  | P/E - Low | 17.6 |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  | Projections for 10 year period | | | | | |
|  |  |  |  | Dividends | Reinvested Dividends | | Retained |
|  | Year | Equity Value | EPS | Paid Out | High P/E | Low P/E | Earnings |
|  | 1 | $9.97 | $2.67 | $1.31 | $1.31 | $1.31 | $1.36 |
|  | 2 | $11.55 | $3.09 | $1.52 | $1.52 | $1.52 | $1.58 |
|  | 3 | $13.38 | $3.58 | $1.76 | $1.76 | $1.76 | $1.83 |
|  | 4 | $15.50 | $4.15 | $2.03 | $2.03 | $2.03 | $2.12 |
|  | 5 | $17.95 | $4.81 | $2.36 | $2.36 | $2.36 | $2.45 |
|  | 6 | $20.79 | $5.57 | $2.73 | $2.73 | $2.73 | $2.84 |
|  | 7 | $24.08 | $6.45 | $3.16 | $3.16 | $3.16 | $3.29 |
|  | 8 | $27.89 | $7.47 | $3.66 | $3.66 | $3.66 | $3.81 |
|  | 9 | $32.30 | $8.65 | $4.24 | $4.24 | $4.24 | $4.41 |
|  | 10 | $37.41 | $10.02 | $4.91 | $4.91 | $4.91 | $5.11 |
|  |  |  |  | $27.67 | $27.67 | $27.67 | $28.80 |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  | Price Appreciation (Low P/E) | | $176.38 | Price Appreciation (High P/E) | | $226.48 |  |
|  | Rate of Return on Appreciation | | 311.32% | Rate of Return on Appreciation | | 428.18% |  |
|  | Annualized | | 15.19% | Annualized |  | 18.11% |  |
|  | With reinvested dividends | | 375.85% | With reinvested dividends | | 492.71% |  |
|  | Annualized | | **16.88%** | Annualized |  | **19.48%** |  |
|  | With out reinvested dividends | | 311.32% | With out reinvested dividends | | 428.18% |  |
|  | Annualized | | 15.19% | Annualized |  | 18.11% |  |

## Table 12: Summary of Models and Recommendations



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**From Cigar Butts to Business Supermodels**

There are numerous books and publications that provide detailed accounts of the history of Berkshire Hathaway as well as [Warren Buffett](http://www.gurufocus.com/StockBuy.php?GuruName=Warren+Buffett)’s life and career. It is also impossible to fully understand Berkshire without studying the life and career of Vice Chairman Charles T. Munger. A list of resources for those interested in a comprehensive history of the company and its leaders is provided as an appendix to this document *(available in the forthcoming full analysis)*. This section merely attempts to provide some context regarding the remarkable history of Berkshire Hathaway and [Warren Buffett](http://www.gurufocus.com/StockBuy.php?GuruName=Warren+Buffett)’s investment approach.

**Early Investment Philosophy**

Warren Buffett’s early investment philosophy was largely based on the principles developed by Benjamin Graham. Mr. Buffett has stated on many occasions[1] that his view of investing changed dramatically when he first read Mr. Graham’s book, [*The Intelligent Investor*](http://www.amazon.com/gp/product/0060555661?ie=UTF8&tag=theratwal-20&link_code=as3&camp=211189&creative=373489&creativeASIN=0060555661), in early 1950. Up to that point, Mr. Buffett had read every book on investing available at the Omaha public library but none were as compelling as Mr. Graham’s straight forward approach summarized in the phrase: “Margin of Safety”.   
  
Benjamin Graham’s approach is more fully documented in [*Security Analysis*](http://www.amazon.com/gp/product/0071592539?ie=UTF8&tag=theratwal-20&link_code=as3&camp=211189&creative=373489&creativeASIN=0071592539)which, in contrast to *The Intelligent Investor,* is more targeted toward professional investors. Mr. Graham’s approach involved examining securities from a quantitative perspective and making purchases only when downside risks are minimized. This approach rarely involved speaking to management since doing so could adversely influence the analyst’s impartial view of the data. In particular, Mr. Graham was a proponent of purchasing stocks selling well under “net-net current asset value” arrived at by taking a company’s current assets and subtracting *all* liabilities. In such cases, the buyer was paying nothing for the business as a going concern and had some downside protection due to liquid assets far in excess of all liabilities.

Mr. Buffett was able to leverage the “deep value” approach advocated by Benjamin Graham throughout the 1950s. In the five year period ending in 1961, the Buffett Partnerships trounced the Dow Jones Industrial average with a cumulative return of 251 percent compared to 74.3 percent for the Dow[2]. While Mr. Buffett employed multiple strategies, one approach involved finding companies that fit the “cigar butt” mold, meaning that they had “one puff left” and could be purchased at a deep bargain price. This approach led Mr. Buffett to begin acquiring shares of Berkshire Hathaway, a struggling New England textile manufacturer, in late 1962. While Berkshire Hathaway was trading well under book value at the time, Mr. Buffett would later say that book value “considerably overstated” intrinsic value[3].

**From Cigar Butts to Insurance**

Berkshire Hathaway, as it existed in 1963 when the Buffett Partnership became the company’s largest shareholder, was a *cheap* company from a quantitative perspective but it was not a *good company* in terms of offering a business that had durable competitive advantages. In fact, over the next two decades, Berkshire Hathaway continued to invest in the textile mills but would never gain sufficient traction to complete with overseas competitors with lower cost structures. Textiles are a commodity business and the low price producer has the advantage. In retrospect, Mr. Buffett’s purchase of Berkshire Hathaway was a mistake[4].   
  
While Berkshire’s textile mills were doomed to eventual failure, a period of profitability[5] appeared in the mid to late 1960s that presented Mr. Buffett with a choice: He could either reinvest the profits in the textile business or redeploy the funds elsewhere. Above all else, Mr. Buffett is a master *capital allocator*. He could see the troubles brewing in textiles and, despite attempts by Berkshire’s textile managers to obtain capital for new investments, Mr. Buffett chose to deploy the funds elsewhere.   
  
Berkshire’s entry into the insurance business with the purchase of National Indemnity in 1967[6] was a transformational event for the company. The textile business, despite a temporary period of profitability, required significant capital investments to continue to remain competitive. In contrast, insurance operations that are well run generate significant cash in the form of “float”. Float represents funds that are held by an insurance business between the time when policyholders submit payment and when funds are eventually paid out to settle claims. As long as underwriting practices are sound, float represents a low cost means of funding investments. By purchasing National Indemnity, Berkshire was on its way to transforming from a textile manufacturer *consuming* large amounts of capital at low to negative rates of return into an insurance powerhouse *generating* large amounts of float for investment in other businesses offering better prospects of high returns.

**See’s Candies: The Turning Point**

Few Californians can recall a holiday season where See’s Candies were not a prominent part of the festivities. The brand is so powerful in California and other western states that many consumers would never think of buying a competing product. See’s Candies is a textbook example of a company with a formidable “moat”. Such companies have built up brand identity that cannot be replicated by new entrants even with significant capital investments[7].

Berkshire Hathaway Vice Chairman Charles Munger has been widely credited with convincing Warren Buffett that there are certain situations where deviating from Benjamin Graham’s “deep value” approach can be justified. Mr. Munger has rebutted[8]the notion that his influence was a deciding factor in Mr. Buffett’s overall record, but many accounts[9] of the events surrounding the See’s Candies purchase supports the conclusion that Charlie Munger deserves much credit for shifting Berkshire’s bias from cigar butts selling at a “bargain price” to excellent businesses selling at a “fair price”.   
  
See’s Candies is the perfect example of a business that produces an excellent return on equity year after year but requires very little capital investment in order to sustain the “moat” that makes such returns possible. When Berkshire purchased See’s Candies for $25 million in 1972, the company only had $8 million of net tangible assets. However, See’s was earning approximately $2 million after tax at the time[10]. $17 million of the $25 million purchase price could not be accounted for by assets on See’s balance sheet but represented the value represented by intangible “brand equity”.

Over the first twenty years of Berkshire’s ownership of See’s Candies, sales increased from $29 million to $196 million while pre-tax profits grew from $4.2 million to $42.4 million. However, that is not even the most amazing part of the story. What is more remarkable is that Berkshire Hathaway only had to reinvest $18 million of retained earnings over that twenty year period while $410 million of cumulative pre-tax earnings were sent back to Berkshire for redeployment in other investments[11].   
  
There have been many other key turning points in the history of Berkshire Hathaway but the decision to pay a “premium price” for See Candies in 1972 may best symbolize the transformation of Mr. Buffett’s approach toward investing. This is perfectly summarized in Mr. Buffett’s [1992 Letter to Shareholders](http://www.berkshirehathaway.com/letters/1992.html):   
In my early days as a manager I, too, dated a few toads. They were cheap dates – I’ve never been much of a sport – but my results matched those of acquirers who courted higher-priced toads. I kissed and they croaked.   
After several failures of this type, I finally remembered some useful advice I once got from a golf pro (who, like all pros who have had anything to do with my game, wishes to remain anonymous). Said the pro: “Practice doesn’t make perfect; practice makes permanent.” And thereafter I revised my strategy and tried to buy good businesses at fair prices rather than fair businesses at good prices.

Berkshire Hathaway is the company it is today because Mr. Buffett stopped kissing toads like the original Berkshire textile business and started aggressively pursuing supermodels like See’s Candies instead even if they were more “expensive dates”. As we shall see, Berkshire has no shortage of supermodels today.

**Footnotes:**   
  
[1] For example, see Mr. Buffett’s preface to any recent edition of *The Intelligent Investor*.   
[2] The Buffett Partnership track record is available in many publications. See, for example, Roger Lowenstein’s [Buffett: The Making of an American Capitalist](http://www.amazon.com/gp/product/0812979273?ie=UTF8&tag=theratwal-20&link_code=as3&camp=211189&creative=373489&creativeASIN=0812979273), 1995 Hardcover Edition, Page 69.   
[3] See comment in [Berkshire Hathaway Owner’s Manual,](http://www.berkshirehathaway.com/ownman.pdf) Page 5.   
[4] Mr. Buffett directly stated that buying Berkshire was a mistake in his [1989 letter to shareholders](http://www.berkshirehathaway.com/letters/1989.html).   
[5] See Lowenstein, Page 133.   
[6] For a good history of the National Indemnity purchase, see Lowenstein, pages 133 to 135.   
[7] For an excellent brief history of See’s Candies, see Max Olson’s paper entitled[Quality without Compromise](http://www.maxcapitalcorp.com/articles/Quality.Without.Compromise.pdf).   
[8] See Mr. Munger’s statement in [Poor Charlie’s Almanack, Third Edition](http://www.amazon.com/gp/product/1578645018?ie=UTF8&tag=theratwal-20&link_code=as3&camp=211189&creative=373489&creativeASIN=1578645018), “Rebuttal: Munger on Buffett”   
[9] For example, see Alice Schroeder’s account of the See’s Candies purchase in[Snowball: Warren Buffett and the Business of Life](http://www.amazon.com/gp/product/0553384619?ie=UTF8&tag=theratwal-20&link_code=as3&camp=211189&creative=373489&creativeASIN=0553384619), Chapter 34.   
[10] See the appendix to [Warren Buffett](http://www.gurufocus.com/StockBuy.php?GuruName=Warren+Buffett)’s [1983 Letter to Shareholders](http://www.berkshirehathaway.com/letters/1983.html).   
[11] See [Warren Buffett](http://www.gurufocus.com/StockBuy.php?GuruName=Warren+Buffett)’s [1991 Letter to Shareholders](http://www.berkshirehathaway.com/letters/1991.html).

**The 3 Most Timeless Investment Principles**

His (Graham’s) ideas and methods on investing are well documented in his books, "Security Analysis" (1934), and "The Intelligent Investor" (1949), which are two of the most famous investing texts. These texts are often considered to be requisite reading material for any investor, but they aren't easy reads. Here, we'll condense Graham's main investing principles and give you a head start on understanding his winning philosophy.

**Principle No.1: Always Invest with a Margin of Safety**

[Margin of safety](http://www.investopedia.com/terms/m/marginofsafety.asp) is the principle of buying a security at a significant discount to its [intrinsic value](http://www.investopedia.com/terms/i/intrinsicvalue.asp), which is thought to not only provide high-return opportunities, but also to minimize the downside risk of an [investment](http://www.investopedia.com/articles/basics/07/grahamprinciples.asp). In simple terms, Graham's goal was to buy assets worth $1 for $0.50. He did this very, very well.

To Graham, these business assets may have been valuable because of their stable earning [power](http://www.investopedia.com/articles/basics/07/grahamprinciples.asp) or simply because of their liquid cash value. It wasn't uncommon, for example, for Graham to invest in stocks where the [liquid assets](http://www.investopedia.com/terms/l/liquidasset.asp) on the balance sheet (net of all debt) were worth more than the total [market cap](http://www.investopedia.com/terms/m/marketcapitalization.asp) of the company (also known as "net nets" to Graham followers). This means that Graham was effectively buying businesses for nothing. While he had a number of other strategies, this was the typical investment strategy for Graham.

**Principle No.2: Expect Volatility and Profit from It**

Investing in stocks means dealing with [volatility](http://www.investopedia.com/terms/v/volatility.asp). Instead of running for the exits during times of market stress, the smart investor greets downturns as chances to find great [investments](http://www.investopedia.com/articles/basics/07/grahamprinciples.asp). Graham illustrated this with the analogy of "Mr. Market", the imaginary business partner of each and every investor. Mr. Market offers investors a daily price quote at which he would either buy an investor out or sell his share of the business. Sometimes, he will be excited about the prospects for the business and quote a high price. At other times, he is depressed about the business's prospects and will quote a low price.  
  
Because the stock market has these same emotions, the lesson here is that you shouldn't let Mr. Market's views dictate your own emotions, or worse, lead you in your investment decisions. Instead, you should form your own estimates of the business's value based on a sound and rational examination of the facts. Furthermore, you should only buy when the price offered makes sense and sell when the price becomes too high. Put another way, the market will fluctuate - sometimes wildly - but rather than fearing volatility, use it to your advantage to get bargains in the market or to sell out when your holdings become way [overvalued](http://www.investopedia.com/terms/o/overvalued.asp).

**Principle No.3: Know What Kind of Investor You Are**

Graham advised that investors know their investment selves. To illustrate this, he made clear distinctions among various groups operating in the stock market.  
  
Active Vs. PassiveGraham referred to [active](http://www.investopedia.com/terms/a/activeinvesting.asp) and [passive investors](http://www.investopedia.com/terms/p/passiveinvesting.asp) as "enterprising investors" and "defensive investors".   
  
You only have two real choices: The first is to make a serious commitment in time and [energy](http://www.investopedia.com/articles/basics/07/grahamprinciples.asp) to become a good investor who equates the quality and amount of hands-on research with the expected return. If this isn't your cup of tea, then be content to get a passive, and possibly lower, return but with much less time and work. Graham turned the academic notion of "risk = return" on its head. For him, "Work = Return". The more work you put into your investments, the higher your return should be.      
  
If you have neither the time nor the inclination to do quality research on your investments, then investing in an [index](http://www.investopedia.com/terms/i/index.asp) is a good alternative. Graham said that the defensive investor could get an average return by simply buying the 30 stocks of the [Dow Jones Industrial Average](http://www.investopedia.com/terms/d/djia.asp) in equal amounts. Both Graham and Buffett said that getting even an average return - for example, equaling the return of the [S&P 500](http://www.investopedia.com/terms/s/sp500.asp) - is more of an accomplishment than it might seem. The fallacy that many people buy into, according to Graham, is that if it's so easy to get an average return with little or no work (through indexing), then just a little more work should yield a slightly higher return. The reality is that most people who try this end up doing much worse than average.   
  
In modern terms, the defensive investor would be an investor in index funds of both stocks and bonds. In essence, they own the entire market, benefiting from the areas that perform the best without trying to predict those areas ahead of time. In doing so, an investor is virtually guaranteed the market's return and avoids doing worse than average by just letting the stock market's overall results dictate long-term returns. According to Graham, beating the market is much easier said than done, and many investors still find they don't beat the market. (To learn more, read [Index Investing](http://www.investopedia.com/university/indexes/).)

Speculator Vs. InvestorNot all people in the stock market are investors. Graham believed that it was critical for people to determine whether they were investors or [speculators](http://www.investopedia.com/terms/s/speculator.asp). The difference is simple: an investor looks at a stock as part of a business and the [stockholder](http://www.investopedia.com/articles/basics/07/grahamprinciples.asp) as the owner of the business, while the speculator views himself as playing with expensive pieces of paper, with no [intrinsic value](http://www.investopedia.com/terms/i/intrinsicvalue.asp). For the speculator, value is only determined by what someone will pay for the asset. To paraphrase Graham, there is intelligent speculating as well as intelligent investing - just be sure you understand which you are good at.  
  
**Commentary**Graham's basic ideas are timeless and essential for long-term success. He bought into the notion of buying stocks based on the underlying value of a business and turned it into a science at a time when almost all investors viewed stocks as speculative. Graham served as the first great teacher of the investment discipline, as evidenced by those in his intellectual bloodline who developed their own. If you want to improve your investing skills, it doesn't hurt to learn from the best; Graham continues to prove his worth in his disciples, such as Warren Buffett, who have made a habit of beating the market.

**GO TO** [**http://crisisofcredit.com/**](http://crisisofcredit.com/)

**FAMILIARIZE YOURSELF WITH THIS VIDEO ON THE CRISIS. THEN READ THE FOLLOWING ARTICLE BY JAMES DAVIS:**

**The Cause of the 2008 Financial Crisis**

Posted By James F. Davis

As someone who spent the majority of his life as an international bank analyst and executive, I learned, that to fix a problem, one needs to understand what caused it.  It can be difficult to see because sometimes it takes time for the effects of bad decisions to manifest themselves.  It also requires that we examine the facts rather than our emotional biases.

The facts are that approximately 10% of all mortgage loans in the United States are in default.  Historically, defaults were less than one-third of that, i.e., from 0.25% to 2%. By the end of 2009, that rate was up to 9.2%.

A huge portion of the increased mortgage loan defaults are what are referred to as ‘sub-prime’ loans.  Most of the sub-prime loans had been made to borrowers with poor credit ratings, no down payment on the home financed, and/or no verification of income or assets (Alt-A’s). Close to 40% of these sub-prime and Alt-A’s loans are in default.

These loans increased dramatically as a 9/30/99 New York Times article explained, “In a move that could help increase homeownership rates among minorities and low income consumers, the Fannie Mae Corp. is easing the credit requirements on loans that it will purchase from banks and other lenders.”

Why would banks make such risky loans? The answer is that the Clinton administration pressured the banks to help poor people become homeowners, a noble liberal idea.  Also the Clinton Justice Department threatened banks with lawsuits and fines ($10,000 per application) for redlining (discrimination) if they did not make these loans. Also ACORN was instrumental in providing borrowers and pressuring the banks to make these loans.

To allow Fannie Mae to make more loans, President Clinton also reduced Fannie Mae’s reserve requirement to 2.5%. That means it could purchase and/or guarantee $97.50 in mortgages for every $2.50 it had in equity to cover possible bad debts. If more than 2.5% of the loans go bad, the taxpayers (us) have to pay for them. That is what this bailout is all about. It is not the government paying the banks for the bad loans, it is us!!

Principally, Senate Democrats demanded that Fannie Mae & Freddie Mac (FM&FM) buy more of these risky loans to help the poor.  Since the mortgages purchased and guaranteed by FM&FM are backed by the U.S. government, the loans were re-sold primarily to investment banks which in turn bundled most of them, taking a hefty fee, and sold the mortgages to investors all over the world as virtually risk free.

As long as the Federal Reserve (another government created agency) kept interest rates artificially low, monthly mortgage payments were low and housing prices went up. Many home owners got home equity loans to pay their first mortgages and credit card debt.

Unfortunately home prices peaked in the winter of 2005-06 and the house of cards started to crumble. People could no longer increase their mortgage debt to pay previous debts. Now, we taxpayers are being told we have to bail out the banks and everyone in the world who bought these highly risky loans. The politicians in Congress do not want you to know they caused the mess.

During 2000-2008, the Bush administration made 17 attempts to reform FM&FM, having been made aware by whistleblowers that the books had been cooked by Clinton appointees, James Johnson and Franklin Raines who gave large bonuses to themselves and other Clinton appointees by falsely showing huge profits.

In 2005, John McCain submitted a Fannie Mae reform bill. Democrats blocked it in Committee from getting to the Senate floor for a vote.

By 2006 there was enough evidence of malfeasance that Raines was forced out. He had paid himself over $90 million. Recently the court ordered him to pay back $40 million in fines, bonuses and stock options that he gave himself based on false financial statements of Fannie Mae profits.

In the 2006 elections, the Democrats took control of the House and Senate. There are plenty of videos on the Internet showing many Democrats including Senate Banking Committee Chairman Democrat Christopher Dodd and House Banking Committee Chairman Barney Frank, responsible with overseeing FM&FM, assuring us that there were no problems with FM&FM right up to their collapse.

Not surprisingly, virtually all the investment banks that were in trouble and being bailed out were run by financial supporters of Obama and other Democrats. Secretary of the Treasury Paulsen was head of Goldman Sachs. The new head of the $700 million TARP (Troubled Asset Relief Program) bailout was also from Goldman Sachs. This is like letting the fox be in charge of hen house security.

It was announced that our government will infuse capital into the troubled banks. This gives whoever is in power of our government the ability to force the same kind of abuses that have caused this massive banking crisis in the first place.

Barack Obama has received more campaign donations that any other politician in the past three years from Fannie Mae and Wall Street. FM&FC have been virtually private piggy banks of campaign contributions for Democrats for the past 10 years. Yes, a token amount went to some Republicans.

And there is plenty of blame to go around in this financial crisis, but the reason it happened was 100% caused by a Democrat run government that forced a liberal policy initiated by President Clinton and reforms primarily blocked by Democrats.  One would never know this by watching the news or reading newspapers.

Until the majority of our citizens understand whom (government liberals) and what (liberalism/socialism) caused this mess, we will allow our elected officials, through massive inflation, to lower the standard of living of those of us who are financially prudent and give our earnings to those who are not prudent.

The big excuse for the bailout is that credit markets have frozen up. But it is not true.  There is plenty of credit available for good credit risks.

The only way this can be rectified is to allow the people who made the mistakes to take their losses. It is called taking personal responsibility for one’s actions.

Already we see that the bailout has had virtually no effect on the markets other than to cause huge sell offs because smart investors see that the U.S. is adopting failed liberal socialist policies. Our government is following in the footsteps of Hoover and Roosevelt.

We do not need to have another depression, but the government is taking the steps to make it happen. The taxpayer financed bailout should be reversed immediately as it will only encourage more irresponsible fraudulent behavior.

**Securitization, CDOs, and banking capital**

(I wrote this in August, in another context, for people without a financial background to explain what was going on. Note that it does not describe what has happened since August, which is that we have a liquidity crisis/crisis of confidence as well.)

Even general news accounts presuppose an understanding of terms like “securitization,” “CDO,” and writedown.” So I thought I would provide my own translation.

Historically local banks took deposits from savings account customers and lent money to homebuyers. They paid 1% for the savings accounts and collected 6% on the mortgages, and the spread (5 percentage points in this case) was more than enough to compensate for any homebuyers who couldn’t pay their mortgages. (The numbers are illustrative only.)

Then, as any explanation of the subprime crisis says, banks started reselling and securitizing mortgages. But what does it mean to resell (let alone securitize) a mortgage?

To understand this, you have to look at it from the bank’s point of view. To them, a mortgage is a product. This product gives them a monthly stream of payments – about $1,000 per month for a 30-year, fixed-rate mortgage on a loan amount of $150,000 (numbers are very approximate), but that stream is not guaranteed; the homebuyer might not be able to pay (in which case they might have to renegotiate or foreclose, both of which are costly), or might pay the whole thing early. The price they pay for this product (this stream of payments) is just the loan amount; from their perspective, they are “buying” the stream of payments by paying you the loan amount. The lower the interest rate you get, the higher the price they are paying for your payments.

If Bank A resells your mortgage to Bank B, Bank B buys your payment stream from Bank A in exchange for a lump sum of money. Under stable market conditions, the lump sum that B gives A will be about the same as the lump sum you received from A (in which case A only makes money from various fees). You can also think of this as Bank B loaning you the money for your house, with Bank A acting as an intermediary.

Now, in practice, Bank B (or C, or D, …) is often an investment bank. And Bank B often securitizes your mortgage. This means they take your mortgage and combine it with many (thousands of) similar mortgages. If the mortgages are similar according to certain objective criteria – creditworthiness of borrowers, loan-to-value ratios, etc. – they can be treated as homogeneous. (Something similar happened with corn in the 19th century; certain standards were established for different grades of corn, and from that point bushels of corn from different farms didn’t have to be separately shipped and inspected by buyers, but could be poured together into huge vats.) Now you have a pool of, say, 10,000 mortgages, with about $10 million in payments coming in from borrowers every month. That pool as a whole has a price – the amount someone would pay to get all of those payment streams of that riskiness. In a securitization, the investment bank divides the pool up into many small slices – say 1,000 in this case. Each slice can be bought and sold separately, and each slice entitles the buyer to 1/1,000th of the payments streaming into that pool.

The price of these slices is based on current assumptions about the riskiness of those payments – the riskier those payments are perceived to be, the lower the price anyone will pay for a slice of them. The problem is that at the time those mortgages were securitized, the buyers assumed that housing prices could only go up, and therefore the payments were not very risky; when housing prices began to fall, many more borrowers became delinquent than had been expected. As a result, if you own a slice of that pool, you still own 1/1,000th of the payments coming in, but your expectations of how many payments will come in are much lower than they were when you bought the slice.

(A collaterized debt obligation is a securitization where the slices are not created equal. Some slices are entitled to the first payments that come in each month, and hence are the safest; some slices only get the last payments that come in each month, so when people start defaulting, those are the slides that lose money first.)

This brings us to writedowns and, eventually, to the subject of banking capital. Let’s say you are an investment bank and you paid $1 million for a slice of a securities offering (a pool). You put that on your books as an asset (in the world of finance, a stream of payments coming to you is an asset) valued at $1 million. However, a year later, that slice is only worth $200,000 (you know this because other people selling similar slices of similar pools are only getting 20 cents on the dollar). You generally have to mark your holding to market (account for its current market value), which means now that asset is valued at $200,000 on your balance sheet. This is an $800,000 writedown, and it counts as a loss on your income (profit and loss) statement. And that is what has been going on over the last year, to the tune of over $100 billion at publicly traded banks alone.

The next problem is that, over the last two decades, most of our banks have become giant proprietary trading rooms, meaning that they buy and sell securities for profit. Let’s say you start a bank with $10 million of your own money. That’s your “capital.” You go out and borrow $90 million from other people, typically by selling bonds, which are promises to pay back the money at some interest rate. Then you take the $100 million and buy some stuff (like slices of mortgage pools), which pays you a higher interest rate than you are paying on your bonds. Suddenly you are making money hand over fist. But then let’s say that housing prices start falling, securitized subprime mortgages start plummeting in value, and your $100 million in assets are now only worth $80 million. Since the value of your debt ($90 million) hasn’t changed, you are technically insolvent at this point, because your losses exceed your capital; put another way, the money coming in from your slices of mortgage pools isn’t enough to pay your bondholders.

According to some observers, this is where Fannie and Freddie were until they were bailed out by the U.S. government; by certain accounting rules, they had negative capital.



**Credit default swap vertigo**-Published 23 Feb 2008

**Alan Kohler**

I got vertigo reading a *New York Times* article the other day. The room started spinning and I had to grip the desk, before pouring an emergency cup of tea.

It was a piece about credit default swaps, and how it will be the next subprime-type debacle. The CDS market is getting the wobbles, it seems.

In Australia, for example, the spread on Macquarie Group CDSs has blown out from 60 basis points (0.6 per cent over bank bills) in December to 190 basis points today. The same thing is happening across the United States and last week American International Group shocked the market by confessing that its auditor had found a $US3.6 billion mistake in the valuing of its massive CDS portfolio.

A credit default swap is a contract under which two parties agree to isolate and trade the credit risk of at least one third-party. Under a credit default swap agreement, a protection buyer pays a periodic fee to a protection seller in exchange for a payment by the seller in the event of default in the reference entity.  
  
When a credit event is triggered, the protection seller either takes delivery of the defaulted bond for the par value (physical settlement) or pays the protection buyer the difference between the par value and recovery value of the bond (cash settlement).  
  
Basically credit default swaps are insurance policies, as they can be used by debt owners to hedge, or insure against default on a loan. However, because there is no requirement to actually hold any asset or suffer a loss, credit default swaps can be used to speculate on changes in credit spreads.

Anyway, towards the end of the NY Times article was the news that the market for CDSs now stands at about $US45 trillion, but that the corporate bonds against whose defaults the swaps were created to protect lenders total just $US15.7 trillion.

What on earth does this mean? I was already having enough trouble getting my head around the shadowy, unregulated credit default swap market that is twice the New York stock market to begin with. But the idea that the derivatives were three times the value of the debt they are created against was too much.

It must mean that a lot of people have bought protection who don’t need it – they just did it as a bet that the company will fail.

It’s like short selling a company’s shares. Someone on the other side has bet with you that the company won’t default. It’s like betting on flies crawling up the wall, except without the form guide.

So, for example, when car parts maker Delphi went broke in 2005, the credit default swaps on the company’s debt exceeded the value of the underlying bonds tenfold. Those who had committed to deliver bonds in the event of default couldn’t do so, and an arrangement had to be struck that saw the buyers of protection get US$366.25 for every US$1000 they had bought. If the insurance was in their books at $1000, it had to be written down by $633.75.

Credit default swaps were invented with collateralized debt obligations in 1995 by Blythe Masters, a 34-year Cambridge graduate who was then the head of JP Morgan’s Global Credit Derivatives group.

The CDS market has now grown to be twice the size of the NY stock exchange and it is entirely unregulated. The contract is typically documented under nothing more than a confirmation that references a definition published by the International Swaps and Derivatives Association.

The prices are not reported to the public and trades are done in private – there is no CDS exchange.

They are valued by the institutions involved (that is, the bookies) using sophisticated computer models. The trade is not overseen by regulators and no one is checking whether anyone can meet their obligations.

About a third of swaps are held by banks, according to the banking regulator, the Comptroler of the Currency, some of it to insure against possible default losses among their loan clients and some of it simply to bet against, or for, other banks’ clients.

But of course the big explosion in the trade in default swaps and CDOs has come from hedge funds.

Only about a third of the credit default swaps were created against a specific corporate debt issuer. The rest are either written against indexes representing baskets of debt from a variety of issuers or against collateralized debt obligations (CDOs) which are pools of bonds that include subprime mortgages as well as corporate bonds.

Many CDOs, in fact, act like credit default swaps. The ones that have been sold to now-grumpy Australian municipal councils are created out of thin air and are based on an artificial list of companies, usually a grab-bag US companies that the issuing bank wants to buy insurance against.

If four or five of these companies default, then the buyer of the CDO loses its entire investment. It is simply another form of default insurance for banks, but they have been turned into a form of gambling for hedge funds and investors like municipal councils, who should know better.

Fear of the unknown is now stalking financial markets. Warren Buffett called all these derivatives “financial weapons of mass destruction” and his words are haunting ordinary investors who haven’t the faintest clue about this unseen “dark matter” that is filling the night sky.

During the credit market turmoil of last August, 14 per cent of the CDS trades were “unconfirmed”, which meant one of the counterparties in the resale transactions was unknown, and remained unknown for 30 days.

This means insurance has been bought from, or a bet has been made with, an unknown person. Whether that party can meet the obligation in the event of a default is unknown.

On second thoughts, it is a fear of the Very Well Known: that is, recession.

Recessions have come and gone throughout history, and with them always come some corporate defaults.

So far in this downturn in the United States most of the defaults have been confined to households defaulting on their mortgages and losing their homes. Those defaults are at a record high and the general sense is that there will be more of them this year.

That problem has led to a credit squeeze as banks are forced to rebuild their capital bases to cover the subprime mortgage losses. That is now affecting corporate borrowers who have to refinance their short term debt, and we are seeing several Australian companies in trouble because of that.

But as this corporate recession approaches (or is already here according to some analysts) there is something different: a massive, teetering assembly of insurance and gambling about the consequences of it.

The corporate default bets were laid during a time when optimism was high that there would never be another recession, simply because the time since the last one was so long.

Most of the default gamblers have never seen the large-scale defaults that are caused by recession.

In 2008 the race will be run; the flies will crawl up the wall.

The good news is that for every loser in insurance and gambling, there is a winner. The trouble is nobody has any idea about who the losers will be, let alone their ability to withstand the loss.

The now 47 year-old Blythe Masters might become very famous indeed this year.

# Buffett: How inflation swindles the equity investor (Fortune Classics, 1977)

## ****The central problem in the stock market is that the return on capital hasn't risen with inflation. It seems to be stuck at 12%.****

By Warren E. Buffett

FORTUNE -- It is no longer a secret that stocks, like bonds, do poorly in an inflationary environment. We have been in such an environment for most of the past decade, and it has indeed been a time of troubles for stocks. But the reasons for the stock market's problems in this period are still imperfectly understood.

There is no mystery at all about the problems of bondholders in an era of inflation. When the value of the dollar deteriorates month after month, a security with income and principal payments denominated in those dollars isn't going to be a big winner. You hardly need a Ph.D. in economics to figure that one out.

It was long assumed that stocks were something else. For many years, the conventional wisdom insisted that stocks were a hedge against inflation. The proposition was rooted in the fact that stocks are not claims against dollars, as bonds are, but represent ownership of companies with productive facilities. These, investors believed, would retain their value in real terms, let the politicians print money as they might.

And why didn't it turn out that way? The main reason, I believe, is that stocks, in economic substance, are really very similar to bonds.

I know that this belief will seem eccentric to many investors. They will immediately observe that the return on a bond (the coupon) is fixed, while the return on an equity investment (the company's earnings) can vary substantially from one year to another. True enough. But anyone who examines the aggregate returns that have been earned by companies during the postwar years will discover something extraordinary: the returns on equity have in fact not varied much at all.

**The coupon is sticky**

In the first 10 years after the war -- the decade ending in 1955 -- the Dow Jones industrials had an average annual return on year-end equity of 12.8%. In the second decade, the figure was 10.1%. In the third decade it was 10.9%. Data for a larger universe, the [Fortune 500](http://money.cnn.com/magazines/fortune/fortune500/2011/index.html) (whose history goes back only to the mid-1950s), indicate somewhat similar results: 11.2% in the decade ending in 1965, 11.8% in the decade through 1975. The figures for a few exceptional years have been substantially higher (the high for the 500 was 14.1% in 1974) or lower (9.5% in 1958 and 1970), but over the years, and in the aggregate, the return in book value tends to keep coming back to a level around 12%. It shows no signs of exceeding that level significantly in inflationary years (or in years of stable prices, for that matter).

For the moment, let's think of those companies, not as listed stocks, but as productive enterprises. Let's also assume that the owners of those enterprises had acquired them at book value. In that case, their own return would have been around 12% too. And because the return has been so consistent, it seems reasonable to think of it as an "equity coupon."

In the real world, of course, investors in stocks don't just buy and hold. Instead, many try to outwit their fellow investors in order to maximize their own proportions of corporate earnings. This thrashing about, obviously fruitless in aggregate, has no impact on the equity coupon but reduces the investor's portion of it, because he incurs substantial frictional costs, such as advisory fees and brokerage charges. Throw in an active options market, which adds nothing to the productivity of American enterprise but requires a cast of thousands to man the casino, and frictional costs rise further.

**Stocks are perpetual**

It is also true that in the real world investors in stocks don't usually get to buy at book value. Sometimes they have been able to buy in below book; usually, however, they've had to pay more than book, and when that happens there is further pressure on that 12%. I'll talk more about these relationships later. Meanwhile, let's focus on the main point: as inflation has increased, the return on equity capital has not. Essentially, those who buy equities receive securities with an underlying fixed return just like those who buy bonds.

Of course, there are some important differences between the bond and stock forms. For openers, bonds eventually come due. It may require a long wait, but eventually the bond investor gets to renegotiate the terms of his contract. If current and prospective rates of inflation make his old coupon look inadequate, he can refuse to play further unless coupons currently being offered rekindle his interest. Something of this sort has been going on in recent years.

Stocks, on the other hand, are perpetual. They have a maturity date of infinity. Investors in stocks are stuck with whatever return corporate America happens to earn. If corporate America is destined to earn 12%, then that is the level investors must learn to live with. As a group, stock investors can neither opt out nor renegotiate. In the aggregate, their commitment is actually increasing. Individual companies can be sold or liquidated and corporations can repurchase their own shares; on balance, however, new equity flotation’s and retained earnings guarantee that the equity capital locked up in the corporate system will increase. So, score one for the bond form. Bond coupons eventually will be renegotiated; equity "coupons" won't. It is true, of course, that for a long time a 12% coupon did not appear in need of a whole lot of correction.

**The bondholder gets it in cash**

There is another major difference between the garden variety of bond and our new exotic 12% "equity bond" that comes to the Wall Street costume ball dressed in a stock certificate. In the usual case, a bond investor receives his entire coupon in cash and is left to reinvest it as best he can. Our stock investor's equity coupon, in contrast, is partially retained by the company and is reinvested at whatever rates the company happens to be earning. In other words, going back to our corporate universe, part of the 12% earned annually is paid out in dividends and the balance is put right back into the universe to earn 12% also.

**The good old days**

This was Warren in 1977. Looks pretty much the same.



Click to enlarge.

This characteristic of stocks -- the reinvestment of part of the coupon -- can be good or bad news, depending on the relative attractiveness of that 12%. The news was very good indeed in the 1950s and early 1960s. With bonds yielding only 3 or 4%, the right to reinvest automatically a portion of the equity coupon at 12% was of enormous value. Note that investors could not just invest their own money and get that 12% return. [In today’s environment the bond market looks worse than it did in the 50s and 60s] Stock prices in this period ranged far above book value, and investors were prevented by the premium prices they had to pay from directly extracting out of the underlying corporate universe whatever rate that universe was earning. You can't pay far above par for a 12% bond and earn 12% for yourself.

But on their retained earnings, investors could earn 12%. In effect, earnings retention allowed investors to buy at book value part of an enterprise that, in the economic environment then existing, was worth a great deal more than book value.

It was a situation that left very little to be said for cash dividends and a lot to be said for earnings retention. Indeed, the more money that investors thought likely to be reinvested at the 12% rate, the more valuable they considered their reinvestment privilege, and the more they were willing to pay for it. In the early 1960’s, investors eagerly paid top-scale prices for electric utilities situated in growth areas, knowing that these companies had the ability to re-invest very large proportions of their earnings. Utilities whose operating environment dictated a larger cash payout rated lower prices.

If, during this period, a high-grade, non-callable, long-term bond with a 12% coupon had existed, it would have sold far above par. And if it were a bond with a further unusual characteristic -- which was that most of the coupon payments could be automatically reinvested at par in similar bonds -- the issue would have commanded an even greater premium. In essence, growth stocks retaining most of their earnings represented just such a security. When their reinvestment rate on the added equity capital was 12% while interest rates generally were around 4%, investors became very happy -- and, of course, they paid happy prices.

**Heading for the exits**

Looking back, stock investors can think of themselves in the 1946-66 period as having been ladled a truly bountiful triple dip. First, they were the beneficiaries of an underlying corporate return on equity that was far above prevailing interest rates. Second, a significant portion of that return was reinvested for them at rates that were otherwise unattainable. And third, they were afforded an escalating appraisal of underlying equity capital as the first two benefits became widely recognized. This third dip meant that, on top of the basic 12% or so earned by corporations on their equity capital, investors were receiving a bonus as the Dow Jones industrials increased in price from 133% of book value in 1946 to 220% in 1966. Such a marking-up process temporarily allowed investors to achieve a return that exceeded the inherent earning power of the enterprises in which they had invested.

This heaven-on-earth situation finally was "discovered" in the mid-1960s by many major investing institutions. But just as these financial elephants began trampling on one another in their rush to equities, we entered an era of accelerating inflation and higher interest rates. Quite logically, the marking-up process began to reverse itself. Rising interest rates ruthlessly reduced the value of all existing fixed-coupon investments. And as long-term corporate bond rates began moving up (eventually reaching the 10% area), both the equity return of 12% and the reinvestment "privilege" began to look different.

Stocks are quite properly thought of as riskier than bonds. While that equity coupon is more or less fixed over periods of time, it does fluctuate somewhat from year to year. Investors' attitudes about the future can be affected substantially, although frequently erroneously, by those yearly changes. Stocks are also riskier because they come equipped with infinite maturities. (Even your friendly broker wouldn't have the nerve to peddle a 100-year bond, if he had any available, as "safe.") Because of the additional risk, the natural reaction of investors is to expect an equity return that is comfortably above the bond return -- and 12% on equity versus, say, 10% on bonds issued by the same corporate universe does not seem to qualify as comfortable. As the spread narrows, equity investors start looking for the exits.

But, of course, as a group they can't get out. All they can achieve is a lot of movement, substantial frictional costs, and a new, much lower level of valuation, reflecting the lessened attractiveness of the 12% equity coupon under inflationary conditions. Bond investors have had a succession of shocks over the past decade in the course of discovering that there is no magic attached to any given coupon level: at 6%, or 8%, or 10%, bonds can still collapse in price. Stock investors, who are in general not aware that they too have a "coupon," are still receiving their education on this point.

**Five ways to improve earnings**

Must we really view that 12% equity coupon as immutable? Is there any law that says the corporate return on equity capital cannot adjust itself upward in response to a permanently higher average rate of inflation? There is no such law, of course. On the other hand, corporate America cannot increase earnings by desire or decree. To raise that return on equity, corporations would need at least one of the following: (1) an increase in turnover, i.e., in the ratio between sales and total assets employed in the business; (2) cheaper leverage; (3) more leverage; (4) lower income taxes; (5) wider operating margins on sales.

And that's it. There simply are no other ways to increase returns on common equity. Let's see what can be done with these.

We'll begin with turnover. The three major categories of assets we have to think about for this exercise are accounts receivable, inventories, and fixed assets such as plants and machinery.

Accounts receivable go up proportionally as sales go up, whether the increase in dollar sales is produced by more physical volume or by inflation. No room for improvement here.

With inventories, the situation is not quite so simple. Over the long term, the trend in unit inventories may be expected to follow the trend in unit sales. Over the short term, however, the physical turnover rate may bob around because of special influences -- e.g., cost expectations, or bottlenecks.

The use of last-in, first-out (LIFO) inventory-valuation methods serves to increase the reported turnover rate during inflationary times. When dollar sales are rising because of inflation, inventory valuations of a LIFO company either will remain level (if unit sales are not rising) or will trail the rise in dollar sales (if unit sales are rising). In either case, dollar turnover will increase.

During the early 1970s, there was a pronounced swing by corporations toward LIFO accounting (which has the effect of lowering a company's reported earnings and tax bills). The trend now seems to have slowed. Still, the existence of a lot of LIFO companies, plus the likelihood that some others will join the crowd, ensures some further increase in the reported turnover of inventory.

**The gains are apt to be modest**

In the case of fixed assets, any rise in the inflation rate, assuming it affects all products equally, will initially have the effect of increasing turnover. That is true because sales will immediately reflect the new price level, while the fixed asset account will reflect the change only gradually, i.e., as existing assets are retired and replaced at the new prices. Obviously, the more slowly a company goes about this replacement process, the more the turnover ratio will rise. The action stops, however, when a replacement cycle is completed. Assuming a constant rate of inflation, sales and fixed assets will then begin to rise in concert at the rate of inflation.

To sum up, inflation will produce some gains in turnover ratios. Some improvement would be certain because of LIFO and some would be possible (if inflation accelerates) because of sales rising more rapidly than fixed assets. But the gains are apt to be modest and not of a magnitude to produce substantial improvement in returns on equity capital. During the decade ending in 1975, despite generally accelerating inflation and the extensive use of LIFO accounting, the turnover ratio of the Fortune 500 went only from 1.18/1 to 1.29/1.

Cheaper leverage? Not likely. High rates of inflation generally cause borrowing to become dearer, not cheaper. Galloping rates of inflation create galloping capital needs; and lenders, as they become increasingly distrustful of long-term contracts, become more demanding. But even if there is no further rise in interest rates, leverage will be getting more expensive because the average cost of the debt now on corporate books is less than would be the cost of replacing it. And replacement will be required as the existing debt matures. Overall, then, future changes in the cost of leverage seem likely to have a mildly depressing effect on the return on equity.

More leverage? American business already has fired many, if not most, of the more-leverage bullets once available to it. Proof of that proposition can be seen in some other Fortune 500 statistics: in the 20 years ending in 1975, stockholders' equity as a percentage of total assets declined for the 500 from 63% to just under 50%. In other words, each dollar of equity capital now is leveraged much more heavily than it used to be.

**What the lenders learned**

An irony of inflation-induced financial requirements is that the highly profitable companies -- generally the best credits -- require relatively little debt capital. But the laggards in profitability never can get enough. Lenders understand this problem much better than they did a decade ago -- and are correspondingly less willing to let capital-hungry, low-profitability enterprises leverage themselves to the sky.

Nevertheless, given inflationary conditions, many corporations seem sure in the future to turn to still more leverage as a means of shoring up equity returns. Their managements will make that move because they will need enormous amounts of capital -- often merely to do the same physical volume of business -- and will wish to get it without cutting dividends or making equity offerings that, because of inflation, are not apt to shape up as attractive. Their natural response will be to heap on debt, almost regardless of cost. They will tend to behave like those utility companies that argued over an eighth of a point in the 1960s and were grateful to find 12% debt financing in 1974.

Added debt at present interest rates, however, will do less for equity returns than did added debt at 4% rates in the early 1960s. There is also the problem that higher debt ratios cause credit ratings to be lowered, creating a further rise in interest costs.

So that is another way, to be added to those already discussed, in which the cost of leverage will be rising. In total, the higher costs of leverage are likely to offset the benefits of greater leverage.

Besides, there is already far more debt in corporate America than is conveyed by conventional balance sheets. Many companies have massive pension obligations geared to whatever pay levels will be in effect when present workers retire. At the low inflation rates of 1955-65, the liabilities arising from such plans were reasonably predictable. Today, nobody can really know the company's ultimate obligation. But if the inflation rate averages 7% in the future, a 25-year-old employee who is now earning $12,000, and whose raises do no more than match increases in living costs, will be making $180,000 when he retires at 65.

Of course, there is a marvelously precise figure in many annual reports each year, purporting to be the unfunded pension liability. If that figure were really believable, a corporation could simply ante up that sum, add to it the existing pension-fund assets, turn the total amount over to an insurance company, and have it assume all the corporation's present pension liabilities. In the real world, alas, it is impossible to find an insurance company willing even to listen to such a deal.

Virtually every corporate treasurer in America would recoil at the idea of issuing a "cost-of-living" bond -- a non-callable obligation with coupons tied to a price index. But through the private pension system, corporate America has in fact taken on a fantastic amount of debt that is the equivalent of such a bond.

More leverage, whether through conventional debt or unhooked and indexed "pension debt," should be viewed with skepticism by shareholders. A 12% return from an enterprise that is debt-free is far superior to the same return achieved by a business hocked to its eyeballs. Which means that today's 12% equity returns may well be less valuable than the 12% returns of 20 years ago.

**More fun in New York**

Lower corporate income taxes seem unlikely. Investors in American corporations already own what might be thought of as a Class D stock. The Class A, B, and C stocks are represented by the income-tax claims of the federal, state, and municipal governments. It is true that these "investors" have no claim on the corporation's assets; however, they get a major share of the earnings, including earnings generated by the equity buildup resulting from retention of part of the earnings owned by the Class D shareholders.

A further charming characteristic of these wonderful Class A, B, and C stocks is that their share of the corporation's earnings can be increased immediately, abundantly, and without payment by the unilateral vote of any one of the "stockholder" classes, e.g., by congressional action in the case of the Class A. To add to the fun, one of the classes will sometimes vote to increase its ownership share in the business retroactively -- as companies operating in New York discovered to their dismay in 1975. Whenever the Class A, B, or C "stockholders" vote themselves a larger share of the business, the portion remaining for Class D -- that's the one held by the ordinary investor -- declines.

Looking ahead, it seems unwise to assume that those who control the A, B, and C shares will vote to reduce their own take over the long run. The Class D shares probably will have to struggle to hold their own.

**Bad news from the FTC**

The last of our five possible sources of increased returns on equity is wider operating margins on sales. Here is where some optimists would hope to achieve major gains. There is no proof that they are wrong. But there are only 100 cents in the sales dollar and a lot of demands on that dollar before we get down to the residual, pretax profits. The major claimants are labor, raw materials, energy, and various non-income taxes. The relative importance of these costs hardly seems likely to decline during an age of inflation.

Recent statistical evidence, furthermore, does not inspire confidence in the proposition that margins will widen in a period of inflation. In the decade ending in 1965, a period of relatively low inflation, the universe of manufacturing companies reported on quarterly by the Federal Trade Commission had an average annual pretax margin on sales of 8.6%. In the decade ending in 1975, the average margin was 8%. Margins were down, in other words, despite a very considerable increase in the inflation rate.

If business was able to base its prices on replacement costs, margins would widen in inflationary periods. But the simple fact is that most large businesses, despite a widespread belief in their market power, just don't manage to pull it off. Replacement cost accounting almost always shows that corporate earnings have declined significantly in the past decade. If such major industries as oil, steel, and aluminum really have the oligopolistic muscle imputed to them, one can only conclude that their pricing policies have been remarkably restrained.

There you have the complete lineup: five factors that can improve returns on common equity, none of which, by my analysis, are likely to take us very far in that direction in periods of high inflation. You may have emerged from this exercise more optimistic than I am. But remember, returns in the 12% area have been with us a long time.

**The investor's equation**

Even if you agree that the 12% equity coupon is more or less immutable, you still may hope to do well with it in the years ahead. It's conceivable that you will. After all, a lot of investors did well with it for a long time. But your future results will be governed by three variables: the relationship between book value and market value, the tax rate, and the inflation rate.

Let's wade through a little arithmetic about book and market value. When stocks consistently sell at book value, it's all very simple. If a stock has a book value of $100 and also an average market value of $100, 12% earnings by business will produce a 12% return for the investor (less those frictional costs, which we'll ignore for the moment). If the payout ratio is 50%, our investor will get $6 via dividends and a further $6 from the increase in the book value of the business, which will, of course, be reflected in the market value of his holdings.

If the stock sold at 150% of book value, the picture would change. The investor would receive the same $6 cash dividend, but it would now represent only a 4% return on his $150 cost. The book value of the business would still increase by 6% (to $106) and the market value of the investor's holdings, valued consistently at 150% of book value, would similarly increase by 6% (to $159). But the investor's total return, i.e., from appreciation plus dividends, would be only 10% versus the underlying 12% earned by the business.

When the investor buys in below book value, the process is reversed. For example, if the stock sells at 80% of book value, the same earnings and payout assumptions would yield 7.5% from dividends ($6 on an $80 price) and 6% from appreciation -- a total return of 13.5%. In other words, you do better by buying at a discount rather than a premium, just as common sense would suggest.

During the postwar years, the market value of the Dow Jones industrials has been as low as 84% of book value (in 1974) and as high as 232% (in 1965); most of the time the ratio has been well over 100%. (Early this spring, it was around 110%.) Let's assume that in the future the ratio will be something close to 100%, meaning that investors in stocks could earn the full 12%. At least, they could earn that figure before taxes and before inflation.

**7% after taxes**

How large a bite might taxes take out of the 12%? For individual investors, it seems reasonable to assume that federal, state, and local income taxes will average perhaps 50% on dividends and 30% on capital gains. A majority of investors may have marginal rates somewhat below these, but many with larger holdings will experience substantially higher rates. Under the new tax law, as Fortune observed last month, a high-income investor in a heavily taxed city could have a marginal rate on capital gains as high as 56%.

So let's use 50% and 30% as representative for individual investors. Let's also assume, in line with recent experience, that corporations earning 12% on equity pay out 5% in cash dividends (2.5% after tax) and retain 7%, with those retained earnings producing a corresponding market-value growth (4.9% after the 30% tax). The after-tax return, then, would be 7.4%. Probably this should be rounded down to about 7% to allow for frictional costs. To push our stocks-as-disguised-bonds thesis one notch further, then, stocks might be regarded as the equivalent, for individuals, of 7% tax-exempt perpetual bonds.

**The number nobody knows**

Which brings us to the crucial question -- the inflation rate. No one knows the answer on this one -- including the politicians, economists, and Establishment pundits, who felt, a few years back, that with slight nudges here and there unemployment and inflation rates would respond like trained seals.

But many signs seem negative for stable prices: the fact that inflation is now worldwide; the propensity of major groups in our society to utilize their electoral muscle to shift, rather than solve, economic problems; the demonstrated unwillingness to tackle even the most vital problems (e.g., energy and nuclear proliferation) if they can be postponed; and a political system that rewards legislators with reelection if their actions appear to produce short-term benefits even though their ultimate imprint will be to compound long-term pain.

Most of those in political office, quite understandably, are firmly against inflation and firmly in favor of policies producing it. (This schizophrenia hasn't caused them to lose touch with reality, however; Congressmen have made sure that their pensions -- unlike practically all granted in the private sector -- are indexed to cost-of-living changes after retirement.)

Discussions regarding future inflation rates usually probe the subtleties of monetary and fiscal policies. These are important variables in determining the outcome of any specific inflationary equation. But, at the source, peacetime inflation is a political problem, not an economic problem. Human, behavior, not monetary behavior, is the key. And when very human politicians choose between the next election and the next generation, it's clear what usually happens.

Such broad generalizations do not produce precise numbers. However, it seems quite possible to me that inflation rates will average 7% in future years. I hope this forecast proves to be wrong. And it may well be. Forecasts usually tell us more of the forecaster than of the future. You are free to factor your own inflation rate into the investor's equation. But if you foresee a rate averaging 2% or 3%, you are wearing different glasses than I am.

So there we are: 12% before taxes and inflation; 7% after taxes and before inflation; and maybe zero percent after taxes and inflation. It hardly sounds like a formula that will keep all those cattle stampeding on TV.

As a common stockholder you will have more dollars, but you may have no more purchasing power. Out with Ben Franklin ("a penny saved is a penny earned") and in with Milton Friedman ("a man might as well consume his capital as invest it").

**What widows don't notice**

The arithmetic makes it plain that inflation is a far more devastating tax than anything that has been enacted by our legislatures. The inflation tax has a fantastic ability to simply consume capital. It makes no difference to a widow with her savings in a 5% passbook account whether she pays 100% income tax on her interest income during a period of zero inflation, or pays no income taxes during years of 5% inflation. Either way, she is "taxed" in a manner that leaves her no real income whatsoever. Any money she spends comes right out of capital. She would find outrageous a 120% income tax, but doesn't seem to notice that 6% inflation is the economic equivalent.

If my inflation assumption is close to correct, disappointing results will occur not because the market falls, but in spite of the fact that the market rises. At around 920 early last month, the Dow was up 55 points from where it was 10 years ago. But adjusted for inflation, the Dow is down almost 345 points -- from 865 to 520. And about half of the earnings of the Dow had to be withheld from their owners and reinvested in order to achieve even that result.

In the next 10 years, the Dow would be doubled just by a combination of the 12% equity coupon, a 40% payout ratio, and the present 110% ratio of market to book value. And with 7% inflation, investors who sold at 1800 would still be considerably worse off than they are today after paying their capital-gains taxes.

I can almost hear the reaction of some investors to these downbeat thoughts. It will be to assume that, whatever the difficulties presented by the new investment era, they will somehow contrive to turn in superior results for themselves. Their success is most unlikely. And, in aggregate, of course, impossible. If you feel you can dance in and out of securities in a way that defeats the inflation tax, I would like to be your broker -- but not your partner.

Even the so-called tax-exempt investors, such as pension funds and college endowment funds, do not escape the inflation tax. If my assumption of a 7% inflation rate is correct, a college treasurer should regard the first 7% earned each year merely as a replenishment of purchasing power. Endowment funds are earning nothing until they have outpaced the inflation treadmill. At 7% inflation and, say, overall investment returns of 8%, these institutions, which believe they are tax-exempt, are in fact paying "income taxes" of 87.5%.

**The social equation**

Unfortunately, the major problems from high inflation rates flow not to investors but to society as a whole. Investment income is a small portion of national income, and if per capita real income could grow at a healthy rate alongside zero real investment returns, social justice might well be advanced.

A market economy creates some lopsided payoffs to participants. The right endowment of vocal chords, anatomical structure, physical strength, or mental powers can produce enormous piles of claim checks (stocks, bonds, and other forms of capital) on future national output. Proper selection of ancestors similarly can result in lifetime supplies of such tickets upon birth. If zero real investment returns diverted a bit greater portion of the national output from such stockholders to equally worthy and hardworking citizens lacking jackpot-producing talents, it would seem unlikely to pose such an insult to an equitable world as to risk Divine Intervention.

But the potential for real improvement in the welfare of workers at the expense of affluent stockholders is not significant. Employee compensation already totals 28 times the amount paid out in dividends, and a lot of those dividends now go to pension funds, nonprofit institutions such as universities, and individual stockholders who are not affluent. Under these circumstances, if we now shifted all dividends of wealthy stockholders into wages -- something we could do only once, like killing a cow (or, if you prefer, a pig) -- we would increase real wages by less than we used to obtain from one year's growth of the economy.

**The Russians understand it too**

Therefore, diminishment of the affluent, through the impact of inflation on their investments, will not even provide material short-term aid to those who are not affluent. Their economic well-being will rise or fall with the general effects of inflation on the economy. And those effects are not likely to be good.

Large gains in real capital, invested in modern production facilities, are required to produce large gains in economic well-being. Great labor availability, great consumer wants, and great government promises will lead to nothing but great frustration without continuous creation and employment of expensive new capital assets throughout industry. That's an equation understood by Russians as well as Rockefellers. And it's one that has been applied with stunning success in West Germany and Japan. High capital-accumulation rates have enabled those countries to achieve gains in living standards at rates far exceeding ours, even though we have enjoyed much the superior position in energy.

To understand the impact of inflation upon real capital accumulation, a little math is required. Come back for a moment to that 12% return on equity capital. Such earnings are stated after depreciation, which presumably will allow replacement of present productive capacity -- if that plant and equipment can be purchased in the future at prices similar to their original cost.

**The way it was**

Let's assume that about half of earnings are paid out in dividends, leaving 6% of equity capital available to finance future growth. If inflation is low -- say, 2% -- a large portion of that growth can be real growth in physical output. For under these conditions, 2% more will have to be invested in receivables, inventories, and fixed assets next year just to duplicate this year's physical output -- leaving 4% for investment in assets to produce more physical goods. The 2% finances illusory dollar growth reflecting inflation and the remaining 4% finances real growth. If population growth is 1%, the 4% gain in real output translates into a 3% gain in real per capita net income. That, very roughly, is what used to happen in our economy.

Now move the inflation rate to 7% and compute what is left for real growth after the financing of the mandatory inflation component. The answer is nothing -- if dividend policies and leverage ratios remain unchanged. After half of the 12% earnings are paid out, the same 6% is left, but it is all conscripted to provide the added dollars needed to transact last year's physical volume of business.

Many companies, faced with no real retained earnings with which to finance physical expansion after normal dividend payments, will improvise. How, they will ask themselves, can we stop or reduce dividends without risking stockholder wrath? I have good news for them: a ready-made set of blueprints is available.

In recent years the electric-utility industry has had little or no dividend-paying capacity. Or, rather, it has had the power to pay dividends if investors agree to buy stock from them. In 1975 electric utilities paid common dividends of $3.3 billion and asked investors to return $3.4 billion. Of course, they mixed in a little solicit-Peter-to-pay-Paul technique so as not to acquire a Con Ed ([ED](http://money.cnn.com/quote/quote.html?symb=ED)) reputation. Con Ed, you will remember, was unwise enough in 1974 to simply tell its shareholders it didn't have the money to pay the dividend. Candor was rewarded with calamity in the marketplace.

The more sophisticated utility maintains -- perhaps increases -- the quarterly dividend and then ask shareholders (either old or new) to mail back the money. In other words, the company issues new stock. This procedure diverts massive amounts of capital to the tax collector and substantial sums to underwriters. Everyone, however, seems to remain in good spirits (particularly the underwriters).

**More joy at AT&T**

Encouraged by such success, some utilities have devised a further shortcut. In this case, the company declares the dividend, the shareholder pays the tax, and -- presto -- more shares are issued. No cash changes hands, although the IRS, spoilsport as always, persists in treating the transaction as if it had.

AT&T ([T](http://money.cnn.com/quote/quote.html?symb=T)), for example, instituted a dividend-reinvestment program in 1973. This company, in fairness, must be described as very stockholder-minded, and its adoption of this program, considering the folkways of finance, must be regarded as totally understandable. But the substance of the program is out of Alice in Wonderland.

In 1976, AT&T paid $2.3 billion in cash dividends to about 2.9 million owners of its common stock. At the end of the year, 648,000 holders (up from 601,000 the previous year) reinvested $432 million (up from $327 million) in additional shares supplied directly by the company.

Just for fun, let's assume that all AT&T shareholders ultimately sign up for this program. In that case, no cash at all would be mailed to shareholders -- just as when Con Ed passed a dividend. However, each of the 2.9 million owners would be notified that he should pay income taxes on his share of the retained earnings that had that year been called a "dividend." Assuming that "dividends" totaled $2.3 billion, as in 1976, and that shareholders paid an average tax of 30% on these, they would end up, courtesy of this marvelous plan, paying nearly $700 million to the IRS. Imagine the joy of shareholders, in such circumstances, if the directors were then to double the dividend.

**The government will try to do it**

We can expect to see more use of disguised payout reductions as business struggles with the problem of real capital accumulation. But throttling back shareholders somewhat will not entirely solve the problem. A combination of 7% inflation and 12% returns will reduce the stream of corporate capital available to finance real growth.

And so, as conventional private capital-accumulation methods falter under inflation, our government will increasingly attempt to influence capital flows to industry, either unsuccessfully as in England or successfully as in Japan. The necessary cultural and historical underpinning for a Japanese-style enthusiastic partnership of government, business, and labor seems lacking here. If we are lucky, we will avoid following the English path, where all segments fight over division of the pie rather than pool their energies to enlarge it.

On balance, however, it seems likely that we will hear a great deal more as the years unfold about underinvestment, stagflation, and the failures of the private sector to fulfill needs.

1. Irving Kahn and Robert D. Milne, *Benjamin Graham: The Father of Financial Analysis* (Charlottesville, Va.: The Financial Analysts Research Foundation, 1977), 34. [↑](#footnote-ref-1)