# A Random Walk Down Wall Street

*The Get Rich Slowly but Surely Book*

Burton G. Malkiel

“Not more than half a dozen really good books about investing have been written in the past fifty years. This one may well be the classics category.” —— FORBES

This is a detailed abstract of the book. The opinions in the abstract only reflect those of the author’s not mine, though I largely agree with most of his opinions. The “I” in the abstract refers to the author.

If you are only interested in how to make investment, you can read Part four directly. However, I strongly suggest you read the whole abstract. At least, you don’t need to read the 400-page book.

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Preface
1. Investors would be far better off buying and holding an index fund than attempting to buy and sell individual securities or actively managed mutual funds.
2. The basis thesis of the book: the market prices stocks so efficiently that a blindfolded chimpanzee throwing darts at the Wall Street Journal can select a portfolio that performs as well as those managed by the experts.
3. Through the past 30 years, more than two-thirds of professional portfolio managers have been outperformed by the unmanaged S&P 500 Index.
4. One’s capacity for risk-bearing depends importantly upon one’s age and ability to earn income from noninvestment sources. It is also the case that the risk involved in most investments decreases with the length of time the investment can be held. Thus, optimal investment strategies must be age-related.

Part One: Stocks and Their Value

Chapter 1. Firm Foundations and Castles in the Air
I. What is a random walk?
1. A random walk is one in which future steps or directions cannot be predicted on the basis of past actions. When the term is applied to the stock market, it means that short-run changes in stock prices cannot be predicted. Investment advisory services, earnings predictions, and complicated chart patterns are useless.
2. Market professionals arm themselves against the academic onslaught with one of two techniques, called fundamental analysis and technical analysis. Academics parry these tactics by obfuscating the RANDOM WALK theory with three versions (the “weak”, the “semi-strong,” and the “strong”).

II. Investing as a way of life today
1. I view investing as a method of purchasing assets to gain profit in the form of reasonably predictable income (dividends, interest, or rentals) and/or appreciation over the long term. It is the definition of the time period for the investment return and the predictability of the returns that often distinguish an investment from a speculation.
2. Just to stay even, your investments have to produce a rate of return equal to inflation.
3. Even if you trust all your funds to an investment adviser or to a mutual fund, you still have to know which adviser or which fund is most suitable to handle your money.
4. Most important of all is the fact that investing is fun. It’s fun to pit your intellect against that of the vast investment community and to find yourself rewarded with an increase in assets.

III. Investing in theory
1. All investment returns are dependent, to varying degrees, on future events. Investing is a gamble whose success depends on an ability to predict the future. Traditionally, the pros in the investment community have used one of two approaches to asset valuation: the firm foundation theory or the castle-in-the-air theory.
2. The **Firm-foundation theory**: each investment instrument, be it a common stock or a piece of real estate, has a firm anchor of something called **intrinsic value**, which can be determined by careful analysis of present conditions and future prospects. When market prices fall below (rise above) this firm foundation of intrinsic value, a buying (selling) opportunity arises, because this fluctuation will eventually be corrected. The theory stresses that a stock’s value ought to be based on the stream of earnings a firm will be able to distribute in the future in the form of dividends. It stands to reason that **the greater the present dividends and their rate of increase, the greater the value the stock**; thus, **differences in growth rates are a major factor in stock valuation**.

3. The **castle-in-the-air theory**: it concentrates on **psychic values**. John Maynard Keynes argued that professional investors prefer to devote their energies not to estimating intrinsic values, but rather to analyzing how the crowd of investors is likely to behave in the future and how during periods of optimism they tend to build their hopes into castles in the air. The successful investor tries to beat the gun by estimating what investment situations are most susceptible to public castle-building and then buying before the crowd.

4. Keynes described the playing of the stock market in terms readily understandable: It is analogous to entering a newspaper beauty-judging contest in which one must select the six prettiest faces out of a hundred photographs, with the prize going to the person whose selections most nearly conform to those of the group as a whole. The smart player recognizes that personal criteria of beauty are irrelevant in determining the contest winner. A better strategy is to select those faces the other players are likely to fancy. This logic tends to snowball. Thus, **the optimal strategy is not to pick those faces the player thinks are prettiest, or those the other players are likely to fancy, but rather to predict what the average opinion is likely to be** about what the average opinion will be, or to proceed even further along this sequence.

5. The newspaper-contest analogy represents the ultimate form of the castle-in-the-air theory. **An investment is worth a certain price to a buyer because she expects to sell it to someone else at a higher price**.

6. The castle-in-the-air theory has many advocates, in both the financial and the academic communities. Robert Shiller, in his best-selling book Irrational Exuberance, argues that the mania in Internet and high-tech stocks during the late 1990s can only be explained in terms of mass psychology.

**Chapter 2. The Madness of Crowds**

The psychology of speculation is a veritable theater of the absurd. Although the castle-in-the-air theory can well explain such speculative binges, outguessing the reactions of a fickle crowd is a most dangerous game. Unsustainable prices may persist for years, but eventually they reverse themselves.

1. **the Tulip-Bulb Craze**

   1. In the early 17th century, tulip became a popular but expensive item in Dutch gardens. Many flowers succumbed to a nonfatal virus known as mosaic. It was this mosaic that helped to trigger the wild speculation in tulip bulbs. The virus caused the tulip petals to develop contrasting colored stripes or “flames”. The Dutch valued highly these infected bulbs, called bizarres. In a short time, popular taste dictated that the more bizarre a bulb, the greater the cost of owning it.
2. Slowly, tulipmania set in. At first, bulb merchants simply tried to predict the most popular variegated style for the coming year. Then they would buy an extra large stockpile to anticipate a rise in rice. Tulip bulb prices began to rise wildly. The more expensive the bulbs became, the more people viewed them as smart investments.

3. People who said the prices could not possibly go higher watched with chagrin as their friends and relatives made enormous profits. The temptation to join them was hard to resist; few Dutchmen did. In the last years of the tulip spree, which lasted approximately from 1634 to early 1637, people started to barter their personal belongings, such as land, jewels, and furniture, to obtain the bulbs that would make them even wealthier. Bulb prices reached astronomical levels.

4. The tulip bulb prices during January of 1637 increased 20 fold. But they declined more than that in February. Apparently, as happens in all speculative crazes, prices eventually got so high that some people decided they would be prudent and sell their bulbs. Soon others followed suit. Like a snowball rolling downhill, bulb deflation grew at an increasingly rapid pace, and in no time at all panic reigned.

II. The South Sea Bubble

1. The South Sea Company had been formed in 1711 to restore faith in the government’s ability to meet its obligations. The company took on a government IOU (I owe you: debt) of almost 10 million pounds. As a reward, it was given a monopoly over all trade to the South Seas. The public believed immense riches were to be made in such trade, and regarded the stock with distinct favor.

2. In 1720, the directors decided to capitalize on their reputation by offering to fund the entire national debt, amounting to 31 million pounds. This was boldness indeed, and the public loved it. When a bill to that was introduced in Parliament, the stock promptly rose from £130 to £300.

3. On April 12, 1720, five days after the bill became law, the South Sea Company sold a new issue of stock at £300. The issue could be bought on the installment plan – £60 down and the rest in eight easy payments. Even the king could not resist; he subscribed for stock totaling £100,000. Fights broke out among other investors surging to buy. The price had to go up. It advanced to £340 within a few days. The ease the public appetite, the company announced another new issue – this one at £400. But the public was ravenous. Within a month the stock was £550, and it was still rising. Eventually, the price rose to £1,000.

4. Not even the South Sea was capable of handling the demands of all the fools who wanted to be parted from their money. Investors looked for the next South Sea. As the days passed, new financing proposals ranged from ingenious to absurd. Like bubbles, they popped quickly. The public, it seemed, would buy anything.

5. In the “greater fool” theory, most investors considered their actions the height of rationality as, at least for a while; they could sell their shares at a premium in the “after market”, that is, the trading market in the shares after their initial issue.

6. Realizing that the price of the shares in the market bore no relationship to the real prospects of the company, directors and officers of the South Sea sold out in the summer. The news leaked and the stock fell. Soon the price of the shares
collapsed and panic reigned. Big losers in the South Sea Bubble included Isaac Newton, who exclaimed, “I can calculate the motions of heavenly bodies, but no the madness of people.”

III. Wall street lays an egg
1. From early March 1928 through early September 1929, the market’s percentage increase equaled that of the entire period from 1923 through early 1928.
2. Price manipulation by “investment pools”: The pool manager accumulated a large block of stock through inconspicuous buying over a period of weeks. Next he tried to enlist the stock’s specialist on the exchange floor as an ally. Through “wash-sales” (buy-sell-buy-sell between manager’s allies), the manager created the impression that something big was afoot. Now, tip-sheet writers and market commentators under the control of the pool manager would tell of exciting developments in the offing. The pool manager also tried to ensure that the flow of news from the company’s management was increasingly favorable – assuming the company management was involved in the operation. The combination of tape activity and managed news would bring the public in. Once the public came in, the free-for-all started and it was time discreetly to “pull the plug”. Because the public was doing the buying, the pool did the selling. The pool manager began feeding stock into the market, first slowly and then in larger and larger blocks before the public could collect its senses. At the end of the roller-coaster ride the pool members had netted large profits and the public was left holding the suddenly deflated stock.
3. On September 3, 1929, the market averages reached a peak that was not to be surpassed for a quarter of a century. The “endless chain of prosperity” was soon to break. On Oct 24 (“Black Thursday”), the market volume reached almost 13 million shares. Prices sometimes fell $5 and $10 on each trade. Tuesday, Oct 29, 1929, was among the most catastrophic days in the history of the NYSE. More than 16.4 million shares were traded on that day. Prices fell almost perpendicularly.
4. History teaches us that very sharp increases in stock prices are seldom followed by a gradual return to relative price stability.
5. It is not hard to make money in the market. What is hard to avoid is the alluring temptation to throw your money away on short, get-rich-quick speculative binges.

Chapter 3. Stock Valuation from the sixties through the Nineties

By the 1990s, institutions accounted for more than 90% of the trading volume on the NYSE. And yet professional investors participated in several distinct speculative movements from the 1960s through the 1990s. In each case, professional institutions bid actively for stocks not because they felt such stocks were undervalued under the firm-foundation principles, but because they anticipated that some greater fools would take the shares off their hands at even more inflated prices.

I. The Soaring Sixties
1. The New “New Era”: The growth-stock/New-issue craze:
By Zhipeng Yan

1. Growth was the magic work in those days, taking on an almost mystical significance. More new issues were offered in the 1959-62 period than at any previous time in history. It was called the **tronics boom**, because the stock offering often included some garbled version of the word “electronics” in their title, even if the companies had nothing to do with the electronics industry.

2. Jack Dreyfus commented on the mania as follows: a shoelace making firm (P/E ratio is 6) changed the name from Shoelaces, Inc. to Electronics and Silicon Furth-Burners. In today’s market, the words “electronics” and “silicon” are worth 15 times earnings. However, the real play comes from the word “furth-burners,” which no one understands. A word that no one understands entitles you to double your entire score. Therefore, after the name change, the new P/E ratio = (6 + 15)*2=42!

3. The SEC uncovered many evidence of fraudulence and market manipulation in this period. Many underwriters allocated large portions of hot issues to insiders of the firms such as partners, relatives, officers, and other securities dealers to whom a favor was owed. The tronics boom came back to earth in 1962.


   a. **Part of the genius of the financial market is that if a product is demanded, it is produced.** The product that all investors desired was expected growth in earnings per share. By the mid-1960s, creative entrepreneurs had discovered that growth meant **synergism**, which is the quality of having 2 plus 2 equal 5.

   b. In fact, the major impetus for the conglomerate wave of the 1960s was the acquisition process itself could be made to produce growth in earnings per share. The trick is the ability of the acquiring firm to swap its high-multiple stock for the stock of another firm with a lower multiple. The targeting firm can only “sell” its earnings at multiple of 10, say. But when these earnings are packaged with the acquiring firm, the total earnings could be sold at a multiple of 20.

   c. As a result of such manipulations, corporations are now required to report their earnings on a “fully diluted” basis, to account for the new common shares that must be set aside for potential conversions. The music slowed drastically for the conglomerates on January 19, 1968. On that day, the granddaddy of the conglomerates, Litton Industries, announced that earnings for the second quarter of that year would be substantially less than had been forecast. In the selling wave that followed, conglomerate stocks declined by roughly 40% before a feeble recovery set in.

   d. The aftermath of this speculative phase revealed two factors. First, conglomerates were mortal and were not always able to control their far-flung empires. Second, the government and the accounting profession expressed real concern about the pace of mergers and about possible abuses. Few mutual or pension funds were without large holdings of conglomerate stocks. They were hurt badly. During the 1980s and 1990s deconglomeration came into fashion. Many of the old conglomerates began to shed their unrelated, poor-performing acquisitions to boost their earnings.

3. Performance comes to the market: the Bubble in Concept stocks

   a. With conglomerates shattering about them, the managers of investment funds found another magic word: **performance** in the late 1960s. The commandments
for fund managers were simple: Concentrate your holdings in a relatively few stocks and don’t hesitate to switch the portfolio around if a more desirable investment appears. And because near-term performance was important it would be best to buy stocks with an exciting concept and a compelling and believable story. Hence, the birth of the so-called concept stock.

b. Cortess Randall was the founder of National Student Marketing (NSM). His concept was a youth company for the youth market. Blocks of NSM were bought by 21 institutional investors. Its highest price was 35.25. However, in 1970, its lowest price was 7/8.

II. The Sour Seventies
1. In the 1970s, Wall Street’s pros vowed to return to “sound principles.” Concepts were out and investing in blue-chip companies was in. They were called the “Nifty fifty,” also “one decision” stocks. You made a decision to buy them, once, and your portfolio-management problems were over.
2. Hard as it is to believe, the institutions had started to speculate in blue chips. In 1972, P/E for Sony is 92, for Polaroid is 90, for McDonald’s is 83. Institutional managers blithely ignored the fact that no sizable company could ever grow fast enough to justify an earnings multiples of 80 or 90.
3. The end was inevitable. The Nifty fifty were taken out and shot one by one.

III. The Roaring Eighties
1. The Triumphant Return of New issues: the high-technology, new-issue boom of the first half of 1983 was an almost perfect replica of the 1960s episodes, with the names altered to include the new fields of biotechnology and microelectronics. The total value of new issuers in 1983 was greater than the cumulative total of new issues for the entire preceding decade.
2. Concepts Conquer Again: the Biotechnology Bubble: valuation levels of biotechnology stocks reached an absurd level. In 1980s, some biotech stocks sold at 50 times sales.
3. From the mid-1980s to the late 1980s, most biotechnology stocks lost three-quarters of their market value.

What does it all mean? – Styles and fashions in investors’ evaluations of securities can and often do play a critical role in the pricing of securities. The stock market at times confirms well to the castle-in-the-air theory.

IV. The Nervy Nineties
1. One of the largest booms and busts of the late twentieth century involved the Japanese real estate and stock markets. From 1955 to 1990, the value of Japanese real estate increased more than 75 times. By 1990, Japan’s property was appraised to be worth 5 times as much as all American property.
2. Stock prices increased 100-fold from 1955 to 1990. At their peak in Dec 1989, Japanese stocks had a total market value of about $4 trillion, almost 1.5 times the value of all U.S. equities and close to 45% of the world’s equity market cap.
Stocks sold at more than 60 times earnings, almost 5 times book value, and more than 200 times dividends.

3. The financial laws of gravity know no geographic boundaries. The Nikkei index reached a high of almost 40,000 on the last trading day of the decade of the 1980s. By mid-August 1992, the index had declined to 14,309, a drop of about 63%. In contrast, the DJIA fell 66% from Dec 1929 to its low in the summer of 1932.

Chapter 4. The Biggest Bubble of All: Surfing on the Internet

1. The NASDAQ Index, an index essentially representing high-tech New Economy companies, more than triples from late 1998 to March 2000. The P/E ratios of the stocks in the index that had earnings soared to over 100.

2. Amazon sold at prices that made its total market cap larger than the total market values of all the publicly owned booksellers such as Barnes & Noble. Priceline sold at a total market cap that exceeded the cap of the major carriers United, Delta, and American Airlines combined.

3. Cooper, Dimitrov and Rau found that 63 companies that changed their names to include some Web orientation enjoyed a 125% greater increase in price during 10 day period than that of their peers. In the post-bubble period, they found that stock prices benefited when dot-com was deleted from the firm’s name.

4. The relationship between profits and share price had been severed.

5. Security analysts Speak up:
   a. Mary Meeker was dubbed by Barron’s the “Queen of the Net.” Henry Blodgett was known as “King Henry”. Henry flatly stated that traditional valuation metrics were not relevant in “the big-bang stage of an industry.” Meeker suggested that “this is a time to be rationally reckless.”
   b. Traditionally, ten stocks are rated “buys” for each on that is rated “sell.” But during the bubble, the ratio of buys to sells reached close to 100 to 1.

6. The writers of the media: the bubble was aided and abetted by the media – which turned us into a nation of traders. Journalism is subject to the laws of supply and demand. Since investors wanted more information about Internet investing opportunities, the supply of magazines increased to fill the need.

7. The result was that turnover reached an all-time high. The average holding period for a typical stock was not measured in years but rather in days and hours. Redemption ratios of mutual funds soared and the volatility of individual stock prices exploded.

8. History tells us that eventually all excessively exuberant markets succumb to the laws of gravity. In the early days of automobile, we had close to 100 automobile companies, and most of them became roadkill. The key to investing is not how much industry will affect society or even how much it will grow, but rather its ability to make and sustain profits.

9. The lesson here is not that markets occasionally can be irrational and, therefore, that we should abandon the firm foundation theory. Rather, the clear conclusion is that, in every case, the market did correct itself. The market eventually corrects any irrationality – albeit in its own slow, inexorable fashion. Anomalies can crop up, markets can get irrationally optimistic, and often they attract unwary investors. But
eventually, true value is recognized by the market, and this is the main lesson investors must heed.

Chapter 5. The Firm-foundation Theory of Stock Prices

Firm-foundation theorists view the worth of any share as the present value of all dollar benefits the investor expects to receive from it. The starting point focuses on the stream of cash dividends the company pays. The worth of a share is taken to be the present or discounted value of all the future dividends the firm is expected to pay. The price of a common stock is dependent on several factors:

I. Determinant 1: the expected growth rate:
1. Dividend growth does not go on forever. Corporation and industries have life cycles similar to most living things. Furthermore, there is always the fact that it gets harder and harder to grow at the same percentage rate.
2. Rule 1: A rational investor should be willing to pay a higher price for a share the larger the growth rate of dividends and earnings.
3. Corollary: A rational investor should be willing to pay a higher price for a share the longer an extraordinary growth rate is expected to last.

II. Determinant 2: The expected dividend payout.
1. The higher the payout, other things being equal, the greater the value of the stock. The catch is “other things being equal.” Stocks that pay out a high percentage of earnings in dividends may be poor investments if their growth prospects are unfavorable. Conversely, many companies in their most dynamic growth phase often pay out little or none of their earnings in dividends.
2. Rule 2: A rational investor should be willing to pay a higher price for a share, other things being equal, the larger the proportion of a company’s earnings that is paid out is cash dividends.

III. Determinant 3:
Rule 3: A rational (and risk-averse) investor should be willing to pay a higher price for a share, other things being equal, the less risky the company’s stock.

IV. Determinant 4: the level of market interest rates:
Rule 4: A rational investor should be willing to pay a higher price for a share; other things being equal, the lower are interest rates.

V. Two Caveats
Caveat 1: expectations about the future cannot be proven in the present. Predicting future earnings and dividends requires not only the knowledge and skill of an economist but also the acumen of a psychologist. And it is extremely difficult to be objective.
Caveat 2: Precise figures cannot be calculated from undetermined data. You can’t obtain precise figures by using indefinite factors.

VI. Testing the rules
1. The 2002 data shows that high P/E ratios are associated with high expected growth rates.
2. Fundamental considerations do have a profound influence on market prices. P/E ratios are influenced by expected growth, dividend payouts, risk, and the rate of interest. Higher anticipations of earnings growth and higher dividend payouts tend to increase P/E. Higher risk and higher interest rates tend to pull them down. There is logic to the stock market, just as the firm foundationists assert.
3. It appears that there is a yardstick for value, but one that is a most flexible and undependable instrument. Stock prices are in a sense anchored to certain “fundamentals,” but the anchor is easily pulled up and then dropped in another place. The standards of value are the more flexible and fickle relationships that are consistent with a marketplace heavily influenced by mass psychology.
4. The most important fundamental influence on stock prices is the level and duration of the future growth of corporate earnings and dividends. But, future earnings growth is not easily estimated, even by market professionals.
5. Dreams of castles in the air may play an important role in determining actual stock prices. And even investors who believe in the firm-foundation theory might buy a security on the anticipation that eventually the average opinion would expect a larger growth rate for the stock in the future.
6. It seems that both views of security pricing tell us something about actual market behavior.

Part Two: How the Pros Play the Biggest Game in Town

Chapter 6. Technical and Fundamental analysis

The efficient market theory (from academics) has three versions – the “weak,” the “semi-strong,” and the “strong.” All three forms espouse the general idea that except for long-run trends, future stock prices are difficult, if not impossible, to predict. The weak form attacks the underpinnings of technical analysis, and the semi-strong and strong forms argue against many of the beliefs held by those using fundamental analysis.

1. Technical versus fundamental analysis:
   1. Technical analysis is the method of predicting the appropriate time to buy or sell a stock used by those believing in the castle-in-the-air view of stock pricing. Fundamental analysis is the technique of applying the tenets of the firm-foundation theory to the selection of individual stocks.
   2. Technical analysis is essentially the making and interpreting of stock charts. Thus its practitioners are called chartists. Most chartists believe that the market is only 10% logical and 90% psychological. They generally subscribe to the castle-in-the-air school and view the investment game as one of anticipating how the other players will behave. Charts tell only what the other players have been doing in the past. The chartist’s hope, however, is that
a careful study of what the other players are doing will shed light on what the crowd is likely to do in the future.

3. **Fundamental analysts believe the market is 90% logical and only 10% psychological.** Fundamentalists believe that eventually the market will reflect accurately the security’s real worth. **Perhaps 90% of the Wall Street security analysts consider themselves fundamentalists.**

II. **What Can Charts tell you?**
1. **The first principle** of technical analysis is that all info about earnings, dividends and the future performance of a company is automatically reflected in the company’s past market prices.
2. **The second principle** is that prices tend to move in trends: A stock that is rising tends to keep on rising, whereas a stock at rest tends to remain at rest.
3. As John Magee wrote in the bible of charting, Technical Analysis of Stock Trends, “**Prices move in trends and trends tend to continue until something happens to change the supply-demand balance.**”

III. **The Rationale for the Charting Method**
To me, the following explanations of technical analysis appear to be the most plausible.
1. Trends might tend to perpetuate themselves for either of **two reasons. First,** it has been argued that the crowd instinct of mass psychology makes it so. When investors see the prices of a speculative favorite going higher and higher, they want to jump on the bandwagon and join the rise.
2. **Second,** there may be unequal access to fundamental info about the firm. When some favorable piece of news occurs, it is alleged that the insiders are the first to know and they act, buying the stock and causing its price to rise. The insiders then tell their friends, who act next. Then the professionals find out the news and the big institutions put blocks of the shares in their portfolios. Finally, the poor slobs get the info and buy. This process is supposed to result in a rather gradual increase/decrease in the price of the stock when the news is good/bad.
3. Chartists are convinced that even if they do not have access to this inside info, observation of price movements alone enables them to pick up the scent of the ‘smart money’ and permits them to get in long before the general public.

IV. **Why Might Charting Fail to Work?**
1. First, the chartist buys in only after price trends have been established, and sells only after they have been broken. Because sharp reversals in the market may occur quite suddenly, **the chartist often misses the boat.** By the time an uptrend is signaled, it may already have taken place.
2. Second, such techniques should ultimately be **self-defeating.** As more and more people use it, the value of any technique depreciates.

V. **The Techniques of Fundamental analysis**
1. The technician is interested only in the record of the stock’s price, whereas, the fundamentalist’s primary concern is with what a stock is really worth. **His most important job is to estimate the firm’s future stream of earnings and dividends.** To do this, he must estimate the firm’s sales level, operating costs, corporate tax rates, depreciation policies, and the sources and costs of its capital requirements.

2. Because the general prospects of a company are strongly influenced by the economic position of its industry, the obvious starting point for the security analyst is a study of **industry prospects.** Indeed, in almost all professional investment firms, security analysts specialized in particular industry groups.

**VI. Why Might Fundamental analysis fail to work?**

1. There are **three potential flaws** in this type of analysis. **First,** the info and analysis may be incorrect.

2. **Second,** the security analyst’s estimate of “value may be faulty”.

3. **Third,** the market may not correct its “mistake” and the stock price might not converge to its value estimate.

4. To make matters even worse, the security analyst may be unable to translate correct facts into accurate estimates of earnings for several years into the future. Even if the security analyst’s estimates of growth are correct, this info may already be reflected accurately by the market, and any difference between a security’s price and value may result simply from an incorrect estimate of value.

5. **The final problem** is that even with correct info and value estimates, the stock you buy might still go down. Not only can the average multiple change rapidly for stocks in general but the market can also dramatically change the premium assigned to growth. One should not take the success of fundamental analysis for granted.

**VII. Using Fundamental and Technical analysis together**

Many analysts use a combination of techniques to judge whether individual stocks are attractive for purchase.

1. **Rule 1:** buy only companies that are expected to have above average earnings growth for five or more years. An extraordinary long-run earnings growth rate is the single most important element contributing to the success of most stock investment. The purchaser of a stock whose earnings begin to grow rapidly has a chance at a potential **double benefit – both the earnings and the multiple may increase.**

2. **Rule 2:** never pay more for a stock than its firm foundation of value. Generally, the earnings multiple for the market as a whole is a helpful benchmark. What is proposed is a strategy of buying unrecognized growth stocks whose earnings multiples are not at any substantial premium over the market. In sum, look for growth situations with low price-earnings multiples. If the growth takes place, there’s often a double bonus – both the earnings and the multiple rise, producing large gains.
Beware of very high multiple stocks in which future growth is already discounted. If growth doesn’t materialize, losses are doubly heavy – both earnings and the multiples drop.

3. **Rule 3:** Look for stocks whose stories of anticipated growth are of the kind on which investors can build castles in the air.

The above rules seem sensible; the point is whether they really work? – Not really (However, the author uses these rules as advice for those investors who want to pick stocks by themselves, though he strongly recommend investors to buy index funds, please refer to Chapter 15)!

Chapter 7. Technical analysis and the Random walk theory

1. I personally have **never known a successful technician.** Technical analysis is anathema to the academic world.

2. **Chartists believe momentum exists in the market.** The “technical rules” have been tested exhaustively. The results reveal that past movements in stock prices cannot be used reliably to foretell future movements. The stock market has little, if any, memory. While the market does exhibit some momentum from time to time, it does not occur dependably and there is not enough persistence in stock prices to overwhelm the substantial transactions costs involved in undertaking trend-following strategies.

3. For example, technical lore has it that if the price of a stock rose yesterday it is more likely to rise today. It turns out that the correlation of past price movements with present and future price movements is slightly positive but very close to zero.

4. Yes, history does tend to repeat itself in the stock market, but in an infinitely surprising variety of ways that confound any attempts to profit from a knowledge of past price patterns.

5. The market is not a perfect random walk. But any systematic relationships that exist are so small that they are not useful for an investor.

6. **Not one has consistently outperformed the placebo of a buy-and-hold strategy.** Technical methods cannot be used to make useful investment strategies. This is the fundamental conclusion of the random walk theory.

7. **Chartists recommend trades** – almost every technical system involves some degree of in-and-out trading. Trading generates commissions, and commissions are the lifeblood of the brokerage business. The technicians do not help produce yachts for the customers, but they do help generate the trading that provides yachts for the brokers.

8. Even if markets were dominated during certain periods by irrational crowd behavior, the stock market might still well be approximated by a random walk.

9. All that can be said is that the small amount of info contained in stock market pricing patterns has not been shown to be sufficient to overcome the transactions costs involved in acting on that info.

10. No technical scheme whatever could work for any length of time. **Any regularity in the stock market that can be discovered and acted upon profitably is bound to destroy itself.** This is the fundamental reason why I am
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convinced that no one will be successful in using technical methods to get above-average returns in the stock market.

11. Using technical analysis for market timing is especially dangerously. Because there is a long-term uptrend in the stock market, it can be very risky to be in cash. A study by Seybun found that 95% of the significant market gains over the 30 year period from the mid-1960s through the mid-1990s came on 90 of the roughly 7500 trading days. If you happened to miss those 90 days, just over 1 percent of the total, the generous long-run stock market returns of the period would have been wiped out. The point is that market timers risk missing the infrequent large sprints that are the big contributors to performance.

Chapter 8. How good is Fundamental analysis?

Two opposing views about the efficacy of fundamental analysis. Wall streeters feel that fundamental analysis is becoming more powerful and skillful at the time. People in academic community have argued that fund managers and their fundamental analysts can do no better at picking stocks than a rank amateur.

1. Analysts can’t predict consistent long-run growth because it does not exist.
2. The careful estimates of security analysts do little better than those that would be obtained by simple extrapolation of past trends, which we have already seen are no help at all. Indeed, when compared with actual earnings growth rates, the five-year estimates of security analysts were actually worse than the predictions from several naïve forecasting models.
3. Of course, in each year some analysts did much better than average, but no consistency in their pattern of performance was found. Analysts who did better than average one year were no more likely than the others to make superior forecasts in the next year.
4. Five factors that help explain why security analysts have such difficulty in predicting the future:
   a. The influence of random events.
   b. The production of dubious reported earnings through “creative” accounting procedures by companies.
   c. The basic incompetence of many of the analysts themselves.
   d. The loss of the best analysts to the sales desk or to portfolio managements
   e. The conflicts of interest facing securities analysts at firms with large investment banking operations: to be sure, when an analyst says “buy” he may mean “hold”, and when he says “hold” he probably means this as a euphemism for “dump this piece of crap as soon as possible.” Researchers found that stock recommendations of Wall Street firms without investment banking relationships did much better than the recommendations of brokerage firms that were involved in profitable investment banking relationships with the companies they covered.
5. Many at the funds are the best analysts and portfolio managers in the business. However, investors have done no better with the average mutual fund than they could have done by purchasing and holding an unmanaged broad stock index.
6. There are many funds beating the averages – some by significant amounts. The problem is that there is no consistency to performances. Many of the top funds of the 1970s ranked close to the bottom over the next decade.
7. The ability of mutual fund managers to time the market has been egregiously poor.  
Fundamental analysis is no better than technical analysis in enabling investors to capture above-average returns.
8. The board (semi-strong and strong) forms of the efficient-market theory:  
The “narrow” (weak) form of the theory says that technical analysis – looking at past stock prices is useless. The “board” forms state that fundamental analysis is not helpful either. Fundamental analysis cannot produce investment recommendations that will enable an investor consistently to outperform a strategy of buying and holding an index fund.

The efficient-market theory does not state that stock prices move aimlessly and erratically and are insensitive to changes in fundamental info. On the contrary, the reason prices move in a random walk is just the opposite: the market is so efficient – prices move so quickly when new info does arise – that no one can consistently buy or sell quickly enough to benefit. And real news develops randomly, that is, unpredictably.

9. The author’s view is between the pure academic view (pros cannot outperform randomly selected portfolios of stocks with equivalent risk characteristics) and the view of investment managers (professionals certainly outperform all amateur and casual investors in managing money). I believe that investors might reconsider their faith in professional advisers, but I am not ready to damn the entire field.
10. I worry about accepting all the tenets of the efficient-market theory, in part because the theory rests on several fragile assumptions. The first is that perfect pricing exists. We have seen ample evidence that stocks sometimes do not sell on the basis of anyone’s estimate of value – that purchasers are often swept up in waves of frenzy. Another fragile assumption is that news travels instantaneously. Finally, there is the enormous difficulty of translating known info about a stock into an estimate of true value.

Part Three: The New Investment Technology

Chapter 9. A New Walking Shoe: Modern Portfolio Theory

Many academics agree: the method of beating the market is to assume greater risk. Risk and risk alone, determines the degree to which returns will be above or below average, and thus decides the valuation of any stock relative to the market.

I. Defining Risk:
1. Financial risk has generally been defined as the variance or standard deviation of returns.
2. It is quite true that only the possibility of downward disappointments constitutes risk. Nevertheless, as a practical matter, as long as the distribution of returns is symmetric – that is, as long as the chances of extraordinary gain are roughly the same as the probabilities for disappointing returns and losses – a dispersion or variance measure will suffice as a risk measure.
3. Although the pattern of historical returns from individual securities has not usually been symmetric, the returns from well-diversified portfolios of stocks do seem to be distributed approximately symmetrically.
II. Documenting Risk: A long-run Study – stylized facts
1. On average, investors have received higher rates of return for bearing greater risk.
2. Stocks have tended to provide positive “real” rates of return, that is, returns after washing out the effects of inflation.

III. Reducing Risk: Modern Portfolio Theory (MPT)
1. Portfolio theory begins with the premise that all investors are risk-averse.
2. Harry Markowitz discovered that portfolios of risky stocks might be put together in such a way that the portfolio as a whole could be less risky than the individual stocks in it.
3. As long as there is some lack of parallelism in the fortunes of the individual companies in the economy, diversification will always reduce risk.

IV. Diversification in Practice
1. A portfolio of 50 equal-sized and well-diversified US stocks can reduce total risk by over 60%. As further increases in the number of holdings do not produce much additional risk reduction.
2. About 50 is also the golden number for global-minded investors. The international diversified portfolio tends to be less risky than the one of corresponding size drawn purely from US stocks.
3. Investors may do even better by including stocks from emerging markets in their overall mix. Correlations between broad indexes of emerging market stocks and the US stock market are generally lower than those of the US stock market with developed foreign markets.
4. There are also compelling reasons to diversify a portfolio with other asset classes. Real estate investment trusts (REITs), enable investors to buy portfolios of commercial real estate properties. Real estate returns don’t move in tandem with other assets. For example, during periods of accelerating inflation, properties tend to do much better than other common stocks. Thus, adding real estate to a portfolio tends to reduce its overall volatility. Treasury inflation-protection securities do not mirror those of other assets, and tend to provide relatively stable returns when held to maturity.

Chapter 10. Reaping Reward by Increasing Risk
Diversification cannot eliminate all risk. Sharpe-Lintner-Black tried to determine what part of a security’s risk can be eliminated by diversification and what part cannot. The result is known as the Capital asset pricing model (CAPM). The basic logic is that there is no premium for bearing risks that can be diversified away. Thus, to get a higher average long-run rate of return in a portfolio, you need to increase the risk level of the portfolio that cannot be diversified away.

I. Beta and Systematic risk
1. Two kinds of risks: systematic risk and unsystematic risk. Systematic risk cannot be eliminated by diversification. It is because all stocks move more or less in tandem that even diversified stock portfolios are risky. Unsystematic risk is the variability in
stock prices that results from factors peculiar to an individual company. The risk associated with such variability is precisely the kind that diversification can reduce.

2. The whole point of portfolio theory is that, to the extend that stocks don’t move in tandem all the time, variations in the returns from any one security tend to be washed away or smoothed out by complementary variation in the returns from other securities.

3. The beta calculation is essentially a comparison between the movements of an individual stock (or portfolio) and the movements of the market as a whole. Professionals call high-beta stocks aggressive investments and label low-beta stocks as defensive.

4. Risk-averse investors wouldn’t buy securities with extra risk without the expectation of extra reward. But not all of the risk of individual securities is relevant in determining the premium for bearing risk. The unsystematic part of the total risk is easily eliminated by adequate diversification. The only part of total risk that investors will get paid for bearing is systematic risk, the risk that diversification cannot help.

II. CAPM

1. Before the advent of CAPM, it was believed that the return on each security was related to the total risk inherent in that security.

2. The theory says that the total risk of each individual security is irrelevant. It is only the systematic component that counts as far as extra rewards go. The beta is the measure of the systematic risk.

3. As the systematic risk (beta) of an individual stock (or portfolio) increases, so does the return an investor can expect.

4. If the realized return is larger than that predicted by the overall portfolio beta, the manager is said to have produced a positive alpha.

III. Look at the record

1. Fama and French found that the relationship between beta and return is essentially flat.

2. The author believes that “the unearthing of serious cracks in the CAPM will not lead to an abandonment of mathematical tools in financial analysis and a return to traditional security analysis. There are many reasons to avoid a rush to judgment of the death of beta:
   a. The beta measure of relative volatility does capture at least some aspects of what we normally think of as risk.
   b. It is very difficult to measure beta with any degree of precision. The S&P 500 Index is not “the market”. The total market contains many additional stocks in the US and thousands more in foreign countries. Moreover, the total market includes bonds, real estate, precious metals, and also human capital.
   c. Investors should be aware that even if the long-run relationship between beta and return is flat, beta can still be a useful investment management tool.

IV. Arbitrage Pricing Theory
1. It is fair to conclude that risk is unlikely to be captured adequately by a single beta statistic. It appears that several other systematic risk measures affect the valuation of securities.

2. In addition, there is some evidence that security returns are related to size, and also to P/E multiples and price-book value ratios.

3. If one wanted for simplicity to select the one risk measure most closely related to expected returns, the best single risk proxy turned out to be the extent of disagreement among security analysts’ forecast for each individual company. Companies for which there is a broad consensus with respect to the growth of future earnings in dividends seem to be considered less risky than companies for which there is little agreement among security analysts.

To sum up, the stock market appears to be an efficient mechanism that adjusts quite quickly to new info. Neither technical analysis, nor fundamental analysis seems to yield consistent benefits. It appears that the only way to obtain higher long-run investment returns is to accept greater risks.

Unfortunately, a perfect risk measure does not exist. The actual relationship between beta and rate of return has not corresponded to the relationship predicted in the theory during long periods of the twentieth century. Moreover, betas for individual stocks are not stable over time, and they are very sensitive to the market proxy against which they are measured.

Chapter 11. Potshots at the Efficient-Market Theory and Why they Miss

Robert Shiller concluded from a longer history of stock market fluctuations that stock prices show far “too much variability” to be explained by an efficient-market theory of pricing, and that one must look to behavioral considerations and to crowd psychology to explain the actual process of price determination in the stock market.

The author reviewed all the recent research proclaiming the demise of the efficient-market theory and purporting to show that market prices are, in fact, predictable. His conclusion is that such obituaries are greatly exaggerated and that the extent to which the stock market is usefully predictable has been vastly overstated. He shows that following the tenets of the efficient-market theory – that is, buying and holding a broad-based market index fund – is still the only game in town. Although market may not always be rational in the short run, it always is over the long haul.

I. What do we mean by saying markets are efficient?

1. Markets can be efficient even if they sometimes make egregious errors in valuation. Markets can be efficient even if stock prices exhibit greater volatility than can apparently be explained by fundamentals such as earnings and dividends.

2. Economists view markets as amazingly successful devices for reflecting new info rapidly and, for the most part, accurately. Above all, we believe that financial markets are efficient because they don’t allow investors to earn above-average returns without accepting above-average risks.
3. No one can consistently predict either the direction of the stock market or the relative attractiveness of individual stocks and thus no one can consistently obtain better overall returns than the market. And while there are undoubtedly profitable trading opportunities that occasionally appear, there are quickly wiped out once they become known. **No one person or institution has yet to produce a long-term, consistent record of finding money-making, risk-adjusted individual stock-trading opportunities, particularly if they pay taxes and incur transactions costs.**

II. **Potshots that completely miss the target**

1. **Dogs of the Dow:** out-of-favor stocks eventually tend to reverse direction. The strategy entailed buying each year the ten stocks in the DJ that had the highest dividend yields. The idea was that these ten stocks were the most out of favor, so they typically had low price-earnings multiples and low price-to-book-value ratios as well. This strategy consistently underperformed the overall market during the last half of the 1990s. “The strategy became too popular” and ultimately self-destructed.

2. **January Effect:** stock-market returns have tended to be especially high during the first two weeks of January. The effect appears to be particularly strong for smaller firms. One possible explanation for it is that tax effects are at work. Some investors may sell securities at the end of the calendar year to establish short-term capital losses for income tax purposes. Although this effect could be applicable for all stocks. It would be larger for small firms because stocks of small companies are more volatile and less likely to be in the portfolios of tax-exempt institutional investors and pension funds. However, the transaction costs of trading in the stocks of small companies are substantially higher than for larger companies (because of the higher bid-asked spreads) and there appears to be no way a commission-paying ordinary investor could exploit this anomaly.

3. **Hot news response:** some academics believe that stock prices underreact to news events and, therefore, purchasing (selling) stocks where good (bad) news comes out will produce abnormal returns. Fama found that apparent underreaction to info is about as common as overreaction, and post-event continuation of abnormal returns is as frequent as post-event reversal.

4. It is obvious that any truly repetitive and exploitable pattern that can be discovered in the stock market and can be arbitraged away will self-destruct. Indeed, the January effect became undependable after it received considerable publicity.

III. **Potshots that get close but still miss the target**

1. **Short-term momentum:** Lo and Mackinlay found that for two decades broad portfolio stock returns for weekly and monthly holding periods showed positive serial correlation. Moreover, Lo and others have suggested that some of the stock-price pattern used by so-called technical analysis may actually have some modest predictive power. Behavioral economists find such short-run momentum to be consistent with psychological feedback mechanisms. Individuals see a stock
price rising and are drawn into the market in a kind of “bandwagon effect.”

However, two factors prevent us from believing markets are inefficient:

a. **It is important to distinguish statistical significance from economic significance.** The statistical dependencies giving rise to momentum, in fact, are extremely small and are not likely to permit investors to realize excess returns.

b. We should ask whether such patterns of serial correlation are consistent over time.

2. **The dividend jackpot approach:** Depending on the forecast horizon involved, as much as 40% of the variability in future market returns can be predicted on the basis of the initial dividend yield of the market as a whole. Investors have earned higher total rates of return from the stock market when the initial dividend yield of the market portfolio was relatively high. These findings are not necessarily inconsistent with efficiency. **Dividend yields of stocks tend to be high (low) when interest rates are high (low).** Consequently, the ability of initial yields to predict returns may simply reflect the adjustment of the stock market to general economic conditions. Moreover, the dividend behavior of US corporations may have changed over time. Companies in 21st century may be more likely to institute a share repurchase program rather than increase their dividends. Thus dividend yield may not be as meaningful as in the past. Finally, this phenomenon does not work consistently with individual stocks. Investors who simply purchase a portfolio of individual stocks with the highest dividend yields in the market will not earn a particularly high rate of return.

3. The Initial P/E predictor: Campbell and Shiller report that over 40% of the variability in long-horizon returns can be predicted on the basis of the initial market P/E.

4. **Long-run return reversals:** buying stocks that performed poorly during the past three years or so is likely to give you above-average returns over the next three years. However, **return reversals over different time periods are often rooted in solid economic facts rather than psychological swings.** The volatility of interest rates constitutes a prime economic influence on share prices. Because bonds – the front-line reflectors of interest-rate direction – compete with stocks for the investor’s dollars, one should logically expect systematic relationships between interest rates and stock prices. When interest rates go up, share prices should fall, other things being the same, so as to provide larger expected stock returns in the future. Only if this happens will stocks be competitive with higher-yielding bonds. Similarly, when interest rates fall, stocks should tend to rise, because they can promise a lower total return and still be competitive with lower-yielding bonds.

5. **The small firm effect:** since 1926, small firms have produced returns over 1.5% points larger than the returns from large stocks. But, small stocks may be riskier than larger stocks and deserve to give investors a higher rate of return. Thus, even if this effect was to persist in the future, it’s not at all clear that such a finding would violate market efficiency. Moreover, this effect may due to “survivorship bias”. And in most world markets it was the larger cap stocks that produced larger rates of return.
IV. Why even close shots miss
1. Regarding to internet bubble, when we know ex post that major errors were made, there were certainly no clear ex ante arbitrage opportunities available to rational investors. And even when clear mispricing arbitrage opportunities seem to have existed, there was no way to exploit them.
2. To me, the most direct and most convincing tests of market efficiency are direct tests of the ability of professional fund managers to outperform the market as a whole. But the fact is that professional investment managers are not able to outperform index funds that simply buy and hold the broad stock-market portfolio. During the past 30 years, about two-thirds of the funds proved inferior to the market as a whole. The same result also holds for professional pension-fund managers. There are some funds which beat index. But the problem for investors is that at the beginning of any period they can’t be sure which funds will be successful and survive.

V. A Summing Up
1. Market valuation rest on both logical and psychological factors.
2. Stock prices display a remarkable degree of efficiency. Info contained in past prices or any publicly available fundamental info is rapidly assimilated into market prices. Prices adjust so well to reflect all-important info that a randomly selected and passively managed portfolio of stocks performs as well as or better than the portfolios selected by the experts.
3. With respect to the evidence indicating that future returns are, in fact, somewhat predictable, there are several points to make.
   a. There are considerable questions regarding the long-run dependability of these effects. Many could be the result of “data snooping”.
   b. Even if there is a dependable predictable relationship, it may not be exploitable by investors (e.g. high transaction costs).

Part Four: A Practical Guide for RANDOM WALKers and other Investors

Chapter 12. A Fitness manual for RANDOM WALKers
1. Exercise 1: cover Thyself with Protection
   1. Disraeli once wrote that “patience is a necessary ingredient of genius.” It’s also a key element in investing; you can’t afford to pull your money out at the wrong time. You need staying power to increase your odds of earning attractive long-run returns. Therefore, you have to have noninvestment resources, such as medical and life insurance, to draw on should any emergency strike you or your family.
   2. Two categories of life insurance:
      a. High-premium policies that combine an insurance scheme with a type of savings plan. They do have some advantages. Earnings on the part of the
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insurance premiums that go into the savings plan accumulate tax-free. But they entail high sales charges.

b. Low premium term insurance that provides death benefits only, with no buildup of cash value.

Malkiel’s advice: buy term insurance for protection – invest the difference yourself. To buy renewable term insurance. You can keep renewing your policy without the need for a physical examination. So-called decreasing term insurance, renewable for progressively lower amounts, should suit many families best, because as time passes, the need for protection usually diminishes. However, term-insurance premiums escalate sharply when you reach the age of sixty or seventy.

3. Take the time to shop around for the best deal. You do not buy insurance from any company with an A.M. Best rating of less than A.

4. In addition, you should keep some reserves in safe and liquid investments. Every family should have a reserve of several months of living expenses to provide a cushion during an emergent/hard time.

II. Exercise 2: Know your investment Objectives

You must decide at the outset what degree of risk you are willing to assume and what kinds of investments are most suitable to your tax bracket.

1. J.P. Morgan once had a friend who was so worried about his stock holdings that he could not sleep at night. The friend asked, “What should I do about my stocks?” Morgan replied, “Sell down to the sleeping point.” Every investor must decide the trade-off he is willing to make between eating well and sleeping well. High investment rewards can be achieved only at the cost of substantial risk-taking.

2. Step One: find your risk-tolerant level. a sleeping scale on investment risk and expected rate of return (P282-3): bank account → money market deposit accounts → Money-market funds → special six-month certificates → Treasury inflation-protection securities (TIPS) → high-quality corporate bonds (prime-quality public utilities) → Diversified portfolios of blue-chip US or developed foreign country common stocks → Real estate → Diversified portfolios of relative risky stocks of smaller growth companies → Diversified portfolios of emerging market stocks.

3. It is critical that you understand yourself before choosing specific securities for investment. Perhaps the most important question to ask yourself is how you felt during a period of sharply declining stock markets. If you became physically ill and even sold out all your stocks rather than staying the course with a diversified investment program, then a heavy exposure of common is not for you.

4. Step Two: identify your tax bracket and income needs. You have to check how much tax you have to pay for your investment returns. For those in a high marginal tax bracket there is a substantial tax advantage from tax-exempt (e.g. municipal) bonds and stocks that have low dividend yields but promise favorably taxed long-term capital gains. If you are in a low tax bracket and need a high current income, you will be better off with taxable bonds and
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high-dividend-paying common stocks, so that you don’t have to incur the heavy transactions charges involved in selling off shares periodically to meet current income needs.

III. Exercise 3: dodge uncle Same whenever you can

One of the best ways to obtain extra investment funds is to avoid taxes legally. You pay no income taxes on the earnings from money invested in a retirement plan until you actually retire and use the money.

1. **Pension plans and IRAs:** check to see if your employer has a pension or profit-sharing plan, such as a 401(k) or 403(b)7 savings plan. If so, you are home free. If not so, you can contribute up to $3000 a year to an Individual Retirement Account if your are single. Contribution limits are scheduled to rise in subsequent years. Although the contribution to your IRA is not tax-deductible if your income is high, the IRA account is still a good deal because the interest earnings on your contributions compound free of tax.

2. **Keogh plans:** For self-employed people, they can contribute as much as 20% of their income, up to $30000 annually. The money paid to Keogh is deductible from taxable income. My advice is to save as much as you can through these tax-sheltered means. You can’t touch IRA or Keogh funds before turning fifty-nine and a half or becoming disabled. If you do, the amount withdrawn is taxed, and you must pay an additional 10% penalty on it. But even with this catch, I believe IRAs and Keoghs are a good deal.

3. **What can Keogh and IRA funds be invested in?** Your choice should depend on your risk preferences as well as the composition of your other investment holdings. My own preference would be stock and bond funds.

4. **Roth IRAs:** for those whose income is below certain levels. The traditional IRA offers “jam today” in the form of an immediate tax deduction. Once in the account, the money and its earnings are only taxed when taken out at retirement. The Roth IRA offers “jam tomorrow” – you don’t get an upfront tax deduction, but your withdrawals are tax-free. In addition, you can Roth and roll. You can roll your regular IRA into a Roth IRA if you are within the certain income limits. You will need to pay tax on all the funds converted, but then neither future investment income nor withdrawals at retirement will be taxed. Which IRA is best for you is dependent on: whether you are likely to be in a higher or lower tax bracket at retirement, whether you have sufficient funds outside your IRA to pay conversion taxes, your age and life expectancy. A rule of thumb: if you are close to retirement and your tax bracket is likely to be lower in retirement, you probably shouldn’t convert, especially if conversion will push you into a higher bracket now. But if you are young and are in a lower tax bracket now, you are very likely to come out well ahead with a Roth IRA.

5. **Tax-deferred annuities:** it is useful if you have exceeded the limitations involved in other tax-advantaged savings programs. It is a contract between you and an insurance company, purchase with one or more payments; the funds deposited accumulate tax-deferred interest, and the money is used to provide regular income payments at some later time. The insurance company
guarantees return of your original deposit at any time. But do check the fee tables. In general, annuities are more expensive than IRAs and Keogh invested in mutual funds. Therefore, you should invest in an annuity only after you have placed the maximum amount in a regular retirement plan, such as a 410(k), 403(b), Keogh, or IRA.

IV. Exercise 4: Let the Yield on your cash reserve keep pace with inflation

Four short-term investment instruments that can at least help you stand up to inflation.

1. **Money-market mutual funds**: in my judgment, they provide the best instrument for many investors’ needs. They combine safety, high yields, and the right to withdraw money with no penalty attached. Most funds allow you to write large checks against your fund balance, generally in amounts of at least $250.

2. **Money-market deposit accounts**: provided by banks. Money funds’ yields tend to higher than the bank accounts. In addition, the money funds allow an unlimited number of checks to be written against balances.

3. **Bank Certificates**: you need at least $10,000 before you can buy. And you can’t write checks against the certificates. There is a substantial penalty for premature withdrawal. Finally, the yield on bank certificates is subject to state and local taxes.

4. **Tax-exempt money-market funds**: they are useful for investors in high tax brackets.

V. Exercise 5: Investigate a Promenade through bond county

There are four kinds of bond purchases you may want to consider.

1. **Zero-coupon bonds**: the purchaser is faced with no reinvestment risk. The main disadvantage is that IRS required that taxable investors declare annually as income a pro rata share of the dollar difference between the purchase price and the par value of the bond.

2. **No-load bond funds**: because bond markets tend to be at least as efficient as stock markets. I recommend low-expense bond index funds, which generally outperform actively managed bond funds. **In no event should you even buy a load fund.** For investors who are very risk averse, I favor GNMA funds. These funds invest exclusively in GNMA (Ginnie Mae) mortgage pass-through securities. Mortgage bonds have one disadvantage in that when interest rates fall, many homeowners refinance their high-rate mortgages and some high-yielding mortgage bonds get repaid early. It is that potential disadvantage that makes the yield on government-guaranteed mortgage bonds so high.

3. **Tax-exempt bonds** are useful for high-bracket investors. If you buy bonds directly (rather than indirectly through mutual funds), I suggest that you **buy new issues rather than already outstanding securities**. New-issue yields are usually a bit sweeter than the yields of seasoned outstanding bonds and you avoid paying transactions charges on new issues. And you should keep
your risk within reasonable bounds by sticking with issues rated at least A. To protect yourself, make sure your bonds have a ten-year call-protection provision that prevents the issuer from calling your bonds to issue new ones at lower rates. If you have substantial funds to invest in tax-exempts ($25000 or more), you should buy tax-exempt bonds directly. If you only have several thousand, buy through a fund.

4. **Inflation-indexed bonds:** TIPS (Treasury inflation protection securities). Although stocks have bestowed generous long-run returns, they usually suffer during inflationary periods. TIPS will offer higher nominal returns, whereas stock and bond prices are likely to fall. But TIPS are taxable. They are not ideal for taxable investors and are best used only in tax-advantaged retirement plans.

VI. **Exercise 6: Renting leads to flabby investment muscles**
1. A good house on good land keeps its value no matter what happens to money. The long-run returns on residential real estate have been quite generous.
2. Interest payments on your mortgage and property taxes – are fully deductible;
3. Realized gains in the value of your house up to substantial amounts are tax-exempt. Own your own home if you can possibly afford it.

VII. **Exercise 7: Beef up with real estate investment trusts (REITs)**
1. Ownership of real estate has produced comparable rates of return to common stocks over the past 30 years.
2. Real estate is an excellent vehicle to provide the benefits of diversification. Because real estate returns have relatively little correlation with other assets, putting some share of your portfolio into real estate can reduce the overall risk of your investment program.
3. Real estate is probably a more dependable hedge against inflation than come stocks in general.
4. Most REITs have generous dividends and in some cases the dividends are partially tax exempt.
5. I believe all investors should have a portion of their portfolios invested in REITs.

VIII. **Exercise 8: Tiptoe through the fields of gold, collectibles, and other investments.**
1. The problem is these things often don’t yield a stream of benefits, such as dividend returns. I am slightly more positive about gold as an investment, but far from enthusiastic. Small gold holdings can easily be obtained now by purchasing shares in one of the specialized mutual funds concentrating on gold.
2. My advice for buying collectibles: buy those things only because you love them, not because you expect them to appreciate in value.
IX. Exercise 9: Commission Costs Are not random; some are cheaper than others

1. Many brokers today will execute your stock orders at discounts of as much as 90% off the standard commission rates charged by the leading brokerage houses. The discount broker usually provides a plain-pipe-rack service. If you want opinions on individual stocks and general portfolio advice and investment suggestions, the discount broker may not be for you.

2. If you know exactly what you want to buy, the discount broker can get it for you at much lower commission rates than the stand full-service house. Some discounters do the transactions off the exchange and the net price you end up paying is actually higher than that charged by a full-service broker. Purely for the execution of stock-market orders, you can use an honest discounter.

In sum, I believe common stocks should form the cornerstone of most portfolios. High returns can be achieved only through higher risk-taking. The amount of risk you can tolerate is partly determined by your sleeping point. Risk is also significantly influenced by your age and by the sources and dependability of your noninvestment income.


1. Very long-run returns from common stocks are driven by two critical factors: the dividend yield at the time of purchase, and the future growth rate of earnings and dividends.

2. The long-run total return for either an individual stock or the market:
   \[ \text{Long-run equity return} = \text{Initial dividend yield} + \text{Growth rate} \]

3. Over shorter periods, say, several years, a third factor is critical in determining returns. It is the change in valuation relationship – specifically, the change in the price-dividend or price-earnings multiple.

4. The multiples vary widely from year to year. They are affected by interest rate and mass psychology among many things.

5. Estimating bond returns becomes murky when bonds are not held until maturity. Bond investors who don’t hold to maturity will have their return increased or decreased depending on what happens to interest rates in the interim.

6. Inflation is the dark horse in any handicapping of financial returns. In principle, common stocks should be an inflation hedge and stocks are not supposed to suffer with an increase in the inflation rate. In theory at least, if the inflation rate rises by 1%, all prices should rise by 1%, including the values of factories, equipment, and inventories. Consequently, the growth rate of earnings and dividends should rise with the rate of inflation, so will the required return on common stocks. However, very high inflation rates are very bad for economy. When price rise by 10%, all prices do not rise by the same amount. Rather, relative prices are far more variable at higher levels of
inflation. Furthermore, the higher the rate of inflation, the more variable and unpredictable inflation becomes. Thus, more volatile levels of real output and higher inflation rates, as well as the accompanying greater volatility of interest rates, increased uncertainty throughout the economy.


The most important investment decision you will probably ever make concerns the balancing of asset categories (stocks, bonds, real estate, money-market securities, etc.) at different stage of your life.

I. Four Asset – allocation principles

1. History shows that risk and return are positively related.
2. The risk of investing in common stocks and bonds depends on the length of time the investments are held. **The longer an investor’s holding period, the lower the risk.**
   a. Thus, your stage in the life cycle is a critical element in determining the allocation of your assets.
   b. A substantial amount (but not all) of the risk of common stock investment can be eliminated by adopting a program of long-term ownership and sticking to it through thick and thin (the buy-and-hold strategy).
   c. **The longer an individual’s investment horizon, the more likely it is that stocks will outperform bonds.** Over any single-year period, there is a one-out-of-three chance that bonds or money-market funds will outperform stocks. But if one looks instead at different twenty- or twenty-five-year holding periods, stocks are the performance winners every time. These data support the advice that younger people should have a larger proportion of their assets in stocks than older people.

<table>
<thead>
<tr>
<th>Total Annual Returns for Basic Asset Classes, 1926-2001</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Average Annual Return</strong></td>
</tr>
<tr>
<td>Small company common stocks</td>
</tr>
<tr>
<td>Large company common stocks</td>
</tr>
<tr>
<td>Long-term corporate bonds</td>
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<tr>
<td>U.S. Treasury bills</td>
</tr>
</tbody>
</table>

3. **Dollar-cost averaging** can be a useful, though controversial, technique to reduce the risk of stock and bond investment.
   a. It means *investing the same fixed amount of money in, for example, the shares of some mutual funds at regular intervals, say, every month, over a long period of time.* It works because you bought more shares when they were cheap and fewer when they were dear.
b. A critical feature of the plan is that you have both the cash and the
courage to continue to invest during bear markets as regularly as you
do in better periods.
c. One potential drawback to dollar-cost average is that **brokerage commissions are relatively high on small purchases.** Thus, it is
usually advisable to buy larger blocks of securities over longer time
intervals. For example, it is cheaper to buy $150 worth of stock each
quarter, or $300 semi-annually, than to invest $50 each month. If you **pick a no-load mutual fund, this problem disappears.** You can
invest as little as $50 per month in most no-load funds, with no
brokerage charges at all.

4. You must distinguish between your attitude toward and your capacity for
risk.
a. A is a recently widowed 65 year old. B is a single 26 year old, just
out of MBA program of Harvard.
b. A cannot work any more because of severe arthritis. Apart from
monthly Social Security payments, all A has to live on are the
earnings on a $250,000 group insurance policy of which she is the
beneficiary and a $50,000 portfolio of small-growth stocks. A’s
capacity to bear risk is severely constrained by her financial situation.
She has neither the life expectancy nor the physical ability to earn
income outside her portfolio. A portfolio of safe investments that can
generate substantial income is what is appropriate for A. Bonds and
high-dividend-paying stocks as from an index funds of real estate
investment trusts are the kinds of investments that are suitable.
c. B has both the life expectancy and the earning power to maintain her
standard of living in the face of any financial loss. Therefore, A’s
portfolio of small-growth stocks would be far more appropriate for B
than for A.

II. Three guidelines to tailoring a life-cycle investment plan
1. **A specific need must be funded with specific assets dedicated to that need:** if you expect to need a $30,000 down payment to buy a house in
one year. That $30,000 to meet a specific need should be invested in a
safe security, maturing when the money is required, such as a one-year
certificate of deposit.
2. Recognize your tolerance for risk (P346).
3. **Persistent saving in regular amounts, no matter how small, pays off:**
you need to **pick no-load mutual funds** to accumulate your nest egg
because direct investments of small sums of money would be
prohibitively expensive. Also, mutual funds permit automatic
reinvestment of interest, or dividends and capital gains.

III. The life-cycle investment guide
Please refer to the chart!
a. For those in their twenties, a very aggressive investment portfolio is recommended. The portfolio is not only heavy in common stocks but also contains a substantial proportion of international stocks including the higher risk emerging markets.

b. As investors age, they should start cutting back on riskier investments and start increasing the proportion of the portfolio committed to bonds and stocks that pay generous dividends such as REITs. By the age of 55, investors should start thinking about the transition to retirement and moving the portfolio toward income production. The proportion of bonds increases and the stock portfolio becomes more conservative and income-producing and less growth-oriented. In retirement, a portfolio heavily weighted in a variety of bonds is recommended. Nevertheless, even in one’s late sixties, 25% of the portfolio is committed to regular stocks and 15% to real estate equities (REITs) to give some income growth to cope with inflation.

c. For most people, I recommend broad-based total stock-market index funds rather than individual stocks for portfolio formation. Do make sure that any mutual funds you buy are truly “no-load” and pick safer, income-producing funds later in life.

d. Everyone should attempt to own his or her own home. I believe everyone should have substantial real estate holdings and, therefore, some part of one’s equity holdings should be in REIT index mutual funds.

Chapter 15. Three Giant steps down Wall street

I. The no-brainer step: investing in index funds:

1. The S&P 500 index beat approximately two-thirds of professional managed portfolios in the 1980s and 1990s. Index funds have regularly produced rates of return exceeding those of active managers by close to 2%. Two reasons:
   a. Much lower management fees: public index funds typically charge a fee of 0.2%, while actively managed public mutual funds charge annual management and market expenses that on average are 1.5%.
   b. Less trading costs: index funds trade only when necessary, whereas active funds typically have a turnover rate close to 100%, and often even more. Such turnover probably costs the fund at least another 0.5-1% of performance a year.

2. Index funds are also relatively predictable. When you buy an actively managed fund, you can never be sure how it will do relative to its peers. When you buy an index fund, you can be reasonably certain that it will track its index and that it is likely to beat the average manager handily.
3. The index fund has another attraction for small investors. **It enables you to obtain very broad diversification with only a small investment.** It also allows you to reduce brokerage charges.

4. Many people incorrectly equate indexing with a strategy of simply buying the S&P 500 index. The S&P 500 omits the thousands of small companies that are among the most dynamic in the economy. Thus, I now believe that if an investor is to buy only one U.S. index fund, the best general U.S. index to emulate is the broader Wilshire 5,000 – Stock Index – not the S&P 500.

5. Moreover, investors can reduce risk by **diversifying internationally.** E.g. Morgan Stanley Capital International (MSCI) index of European, Australian, and Far Eastern (EAFE) securities, and the MSCI emerging markets index.

6. There are index funds **holding REITs and bonds.**

7. Keep in mind: I am assuming here that you hold most if not all of your securities in tax-advantaged retirement plans. Certainly all of your bonds should be held in such accounts. Furthermore, you may want to alter the percentages somewhat depending on your personal capacity for and attitude toward risk.

II. The do-it-yourself step: potentially useful stock-picking rules

1. **Indexing is the strategy I most highly recommend for individuals and institutions.** For those who insist on playing the game themselves, I proposed four rules for successful stock selection.

2. **Rule 1:** **Confine stock purchases to companies that appear able to sustain above-average earnings growth for at least five years.** Consistent growth not only increases the earnings and dividends of the company but may also increase the multiples that the market is willing to pay for those earnings.

3. **Rule 2:** **Never pay more for a stock than can reasonably be justified by a firm foundation of value.** Although I am convinced that you can never judge the exact intrinsic value of a stock. I do feel that you can roughly gauge when a stock seems to be reasonably priced. The **market price-earnings multiple is a good place to start:** you should buy stocks selling at multiples in line with, or not very much above, this ratio. My strategy, then, is to look for growth situations that the market has not already recognized by bidding the stock’s multiple to a large premium. Some people call this a GARP (growth at a reasonable price) strategy. Buy stocks whose P/E’s are low relative to their growth prospects.

4. **Rule 3:** it helps to buy stocks with the kinds of stories of anticipated growth on which investors can build castles in the air. People are emotional – driven by greed, gambling instinct, hope, and fear in their stock-market decisions. This is why successful investing demands both intellectual and psychological acuteness. Stocks are like people – some have more attractive personalities than others. The key to success is being where other investors will be, several months before they get there.

5. **Rule 4:** **Trade as little as possible.** My own philosophy **leads me to minimize trading as much as possible. I am merciless with the losers,** however. With few exceptions, I sell before the end of each calendar year any
By Zhipeng Yan

stocks on which I have a loss. The reason for this timing is that losses are deductible for tax purposes, or can offset gains you may already have taken.

III. The substitute-player step: hiring a professional Wall street walker

Instead of trying to pick the individual winners (stocks), pick the best coaches (investment managers). But be very careful:

1. Many fund advertisements are quite misleading. The number one ranking is typically for a self-selected specific time period and compared with a particular (usually small) group of common stock funds.

2. It is simply impossible for investors to guarantee themselves above-average returns by purchasing those funds with the best recent records because there is no consistent long-run relationship between performance in one period and investment results in the next.

3. If you have to pick a fund, use the Morningstar mutual-fund information service, which is one of the most comprehensive sources of mutual-fund information an investor can find. The reports indicate whether the fund has any sales charges (load fees) and shows the annual expense ratios for the fund and the percentage of the fund’s asset value represented by unrealized appreciation. If you buy actively managed funds you should look for no-load, low-expense funds with little unrealized appreciated to minimize future tax liability.

4. A Primer on Mutual-fund costs. There are two broad categories of costs: “load” fee charged when you buy or sell shares and “expense charges” that are taken out of your investment returns each year.

   **Loading Fees:**
   a. **Front-end load**: a commission charge that is paid when you purchase fund shares. Front-end loads are often as high as 5.75%. So-called low-load funds charge only a 1 to 3% sales charge. Best of all are no-load funds, which have no front-end sales charges at all.
   b. **Back-end loads and exchange fee**: Back-end loads are charges incurred when you redeem fund shares. The charge could be as much as 6% of the value of your redeemed shares if you sell out in the first year, with a declining percentage charge in subsequent years.

   **Expense charges:**
   a. **Operating and investment management expenses**: A fund’s expense ratio expresses the total operating and investment advisory fees incurred by the fund as a percentage of the fund’s average net assets. These expense ratios range from <0.2% to 2%. Beware the loss leader come-on. Some new funds temporarily waive all fees to enhance the advertised current yield. Investors should be alert to the fact that they will be socked for full expenses as soon as the introductory “come-on” period ends.
   b. **12b-1 charges**: these are fund-distribution expenses charged not as a front-end load but rather as a continuing annual charge against fund assets. The “12b-1” refers to an SEC rule that permits these
charges. More than half of the publicly offered mutual funds have 12b-1 fees.

IV. The Malkiel step
   1. Sometimes, close-end funds have attractive discounts. During the late 1970s, the discounts ran as high as 40%. My own explanation for the discounts ran in terms of unexploited market inefficiency and I urged investors to take full advantage of the opportunity for as long as it lasted.
   2. Discounts have narrowed significantly on U.S. closed-end funds. I think the fundamental reason for the narrowing is that our capital markets are reasonably efficient. The market may misvalue assets from time to time, creating temporary inefficiencies. But the financial laws of gravity will eventually take hold and true value will out.
   3. If discounts of 20% or more exist, it is time to buy closed-end funds.
How much risk is right? A quick quiz

A Life Cycle Guide to Investments

A Practical Guide For Random Walkers
### The Sleeping Scale of Major Investments

<table>
<thead>
<tr>
<th>Sleeping Point</th>
<th>Type of Asset</th>
<th>2002 Expected Rate of Return before Income Taxes (%)</th>
<th>Length of Time Investment Must Be Held to Get Expected Rate of Return</th>
<th>Risk Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semicomatose state</td>
<td>Bank accounts</td>
<td>1-3</td>
<td>No specific investment period required. Many thrift institutions calculate interest from day of deposit to day of withdrawal.</td>
<td>No risk of losing what you put in. Deposits up to $100,000 guaranteed by an agency of the federal government. An almost sure loser with high inflation, however.</td>
</tr>
<tr>
<td>Long afternoon naps and sound night’s sleep</td>
<td>Money-market deposit accounts</td>
<td>1-3</td>
<td>No specific investment period required, but check withdrawals limited to three per month.</td>
<td>No risk of losing what you put in. Deposits guaranteed as above. Rates geared to expected inflation and will vary over time.</td>
</tr>
<tr>
<td>Sound night’s sleep</td>
<td>Money-market funds</td>
<td>1-4</td>
<td>No specific investment period required. Most funds provide check-writing privileges.</td>
<td>Very little risk because most funds are invested in government securities and bank certificates. Not usually guaranteed. Rates vary with expected inflation.</td>
</tr>
<tr>
<td>Special six-month certificates</td>
<td>1¼-4</td>
<td>Money must be left on deposit for the entire six months to take advantage of higher rate.</td>
<td>Early withdrawals subject to penalty. Rates geared to expected inflation and will vary.</td>
<td></td>
</tr>
<tr>
<td>Treasury inflation-protection securities (TIPS)</td>
<td>3¾+ inflation rate</td>
<td>These are long-term securities maturing in five years or longer.</td>
<td>Prices can vary if sold before maturity.</td>
<td></td>
</tr>
<tr>
<td>An occasional dream or two—some possibly unpleasant</td>
<td>High-quality corporate bonds (prime-quality public utilities)</td>
<td>6½–7</td>
<td>Investments must be held until maturity (20-30 years) to be assured of the stated rate. (The bonds also need to be protected against redemption.) The bonds may be sold at any time, but market prices vary with interest rates.</td>
<td>Very little risk if held to maturity. Moderate to substantial fluctuations can be expected in realized return if bonds are sold before maturity. Rate geared to expected long-run inflation rate. “Junk bonds” promise much higher returns but with much higher risk.</td>
</tr>
</tbody>
</table>

### The Sleeping Scale of Major Investments (continued)

<table>
<thead>
<tr>
<th>Sleeping Point</th>
<th>Type of Asset</th>
<th>2002 Expected Rate of Return before Income Taxes (%)</th>
<th>Length of Time Investment Must Be Held to Get Expected Rate of Return</th>
<th>Risk Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some tossing and turning before you doze, and vivid dreams before awakening</td>
<td>Diversified portfolios of blue-chip U.S. or developed foreign country common stocks</td>
<td>8-9</td>
<td>No specific investment period required and stocks may be sold at any time. The average expected return assumes a fairly long investment period and can only be treated as a rough guide based on current conditions.</td>
<td>Moderate to substantial risk. In any one year, the actual return could in fact be negative. Diversified portfolios have at times lost 25% or more of their actual value. Contrary to some opinions, a good inflation hedge over the long run.</td>
</tr>
<tr>
<td>Nightmares not uncommon but, over the long run, well rested</td>
<td>Real estate</td>
<td>Similar to common stocks</td>
<td>Same as for common stocks in general if purchase is made through REITs.</td>
<td>Same as above but REITs are good diversifiers and can be a good inflation hedge.</td>
</tr>
<tr>
<td>Nightmares not uncommon but, over the long run, well rested</td>
<td>Diversified portfolios of relatively risky stocks of smaller growth companies</td>
<td>9-10</td>
<td>Same as above. The average expected return assumes a fairly long investment period and can only be treated as a rough guide based on current conditions.</td>
<td>Substantial risk. In any one year the actual return could be negative. Diversified portfolios of very risky stocks have at times lost 50% or more of their value. Good inflation hedge.</td>
</tr>
<tr>
<td>Vivid dreams and occasional nightmares</td>
<td>Diversified portfolios of emerging-market stocks</td>
<td>±11</td>
<td>Plan to hold for at least 10 years. Projected returns impossible to quantify precisely.</td>
<td>Fluctuations up or down of 50% to 75% in a single year are not uncommon but have diversification benefits.</td>
</tr>
<tr>
<td>Bouts of insomnia</td>
<td>Gold</td>
<td>Impossible to predict</td>
<td>High returns could be earned in any new speculative craze as long as there are greater fools to be found.</td>
<td>Substantial risk. Believed to be a hedge against doomsday and hyperinflation. Can play a useful role in balancing a diversified portfolio, however.</td>
</tr>
</tbody>
</table>