The Basics of Investing

How to Make Money in the Current Investment Climate

Muhlenkamp & Company, Inc.
Intelligent Investment Management

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Ron Muhlenkamp is the founder of Muhlenkamp and Company, Inc., established in 1977. He is a nationally recognized, award-winning investment manager, frequent guest on CNBC and CNN and author of the quarterly newsletter, *Muhlenkamp Memorandum*.

Mr. Muhlenkamp's business career has been devoted to the professional management of investment portfolios. His work since 1968 has been focused on extensive studies of investment management philosophies, both fundamental and technical. He has developed a proprietary method of evaluating both equity and fixed income securities that continues to be employed by Muhlenkamp & Company.

Mr. Muhlenkamp received a Bachelor of Science degree in Engineering from M.I.T. in 1966, and a Masters in Business Administration from the Harvard Business School in 1968. He and his wife, Connie, make their home on a farm near Pittsburgh, but travel extensively to meet and talk with companies and clients around the country.

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The Basics of Investing

The Basics of Investing is adapted from a presentation delivered in December 2002. Supporting charts are updated through 2003.

This booklet is a brief overview of the fundamentals of intelligent investment management — an attempt to answer the following questions: What works? What doesn't? and Why?

The facts shown in the tables and charts are nothing new. But, hopefully, our interpretation of these facts will give you something new to think about. Perhaps, you may find it gives you a new perspective on investing which shows that the market can be rational. Perhaps, it may even let you see that much of what the media is telling you about the market is simply sensational hype. And knowing this may let you, the investor, sleep better at night.

The first step in understanding investing is to understand money. So in *Part 1* we will talk about money, inflation, and how inflation drives the investment climate. Then we will show how recognizing the investment climate can make you money.

In *Part 2*, we will then review the three classes of securities: short-term debt, long-term debt and equities. How do they work? What drives their returns? Where should the intelligent investor put his or her money?

The Basics of Investing is the survivor's guide to investing. Understanding the basics can help make sense of all the changing, and often conflicting, investing information that surrounds us. We find that if you don't get too far from the basics, you won't get tagged too far off base.

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The Basics of Investing
Part 1: Understanding Money

In order to understand investing, you have to first understand money. In order to understand today's investing markets, you need to first understand the last twenty to thirty years which set the background for today's markets. The primary driver of major market changes (what we call climate changes) during that time has been inflation and what it has done to our money. So, let's start with that.

Inflation and What It's Done to Our Money

Chart 1

1968 **1978** **2004**

Chart 1 shows three postage stamps: 1968, 1978 and 2004 — six cents, thirteen cents and thirty-seven cents. Each stamp has the same value. Each stamp is first-class postage in the United States. Each stamp has a different price and a different date. What changed between 1968 and 1978 and 1978 and 2004 wasn't the value of the stamp, it was the value of the dollar.

The dollar lost half its value between 1968 and 1978. So, to get the same value, you had to double the price of the stamp. From 1978 to 2004 the dollar lost more than half its value again, so you had to almost triple the price of a stamp.

Our Federal Government has standards on the gallon, so no one can cheat you on a gallon of gas. There are standards on the bushel, there are standards on the ton, and there are standards on the yard, the foot. There are standards on all these things, but there are no standards on the value of our money. We run into trouble when we think of the value of the dollar as being fixed, like our other measures. To illustrate my point, imagine what would happen if there was no standard on one of our other measures.

"Over time, the effect of inflation on our money can be tremendous. We can't afford to overlook it."

My wife, Connie, is a seamstress. She buys fabric by the yard. Suppose the fabric store where she buys fabric manages to shrink their yardstick by a quarter-inch each month. A quarter-inch a month, three inches a year, that's 8% per year. (Between 1968 and 1978, inflation was about 8% a year.) So, the fabric store is shrinking their yardstick by a quarter-inch per month and my wife starts getting short on fabric. She does all the things she normally does and finally concludes that the store is cheating her on the fabric. But what if they had also managed to shrink *her* yardstick by a quarter-inch per month? Now she swears that I'm growing taller! The point is this…in 1968 dollars I'm 37 feet tall! If our yardsticks had shrunk at the same rate as our money, I'd be 37 feet tall in today's measure. The effects of inflation can easily be overlooked because inflation shrinks everyone's yardstick. Over time, the effect of inflation on our money can be tremendous. We can't afford to overlook it.

Chart 2

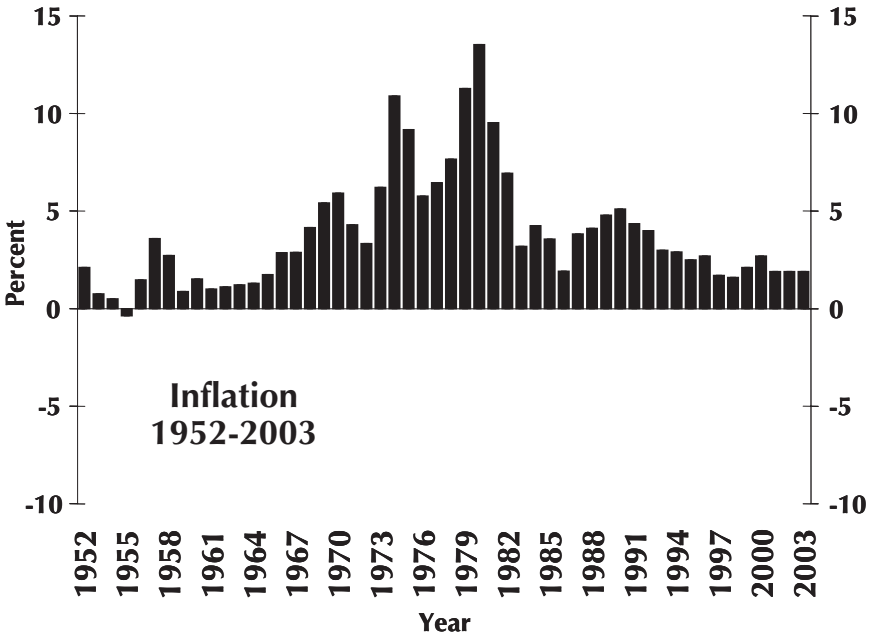
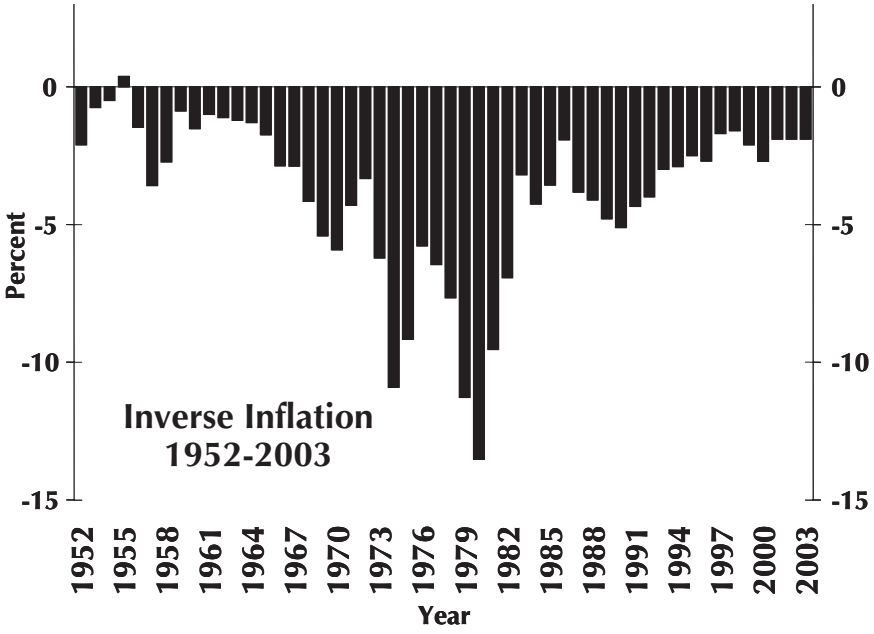


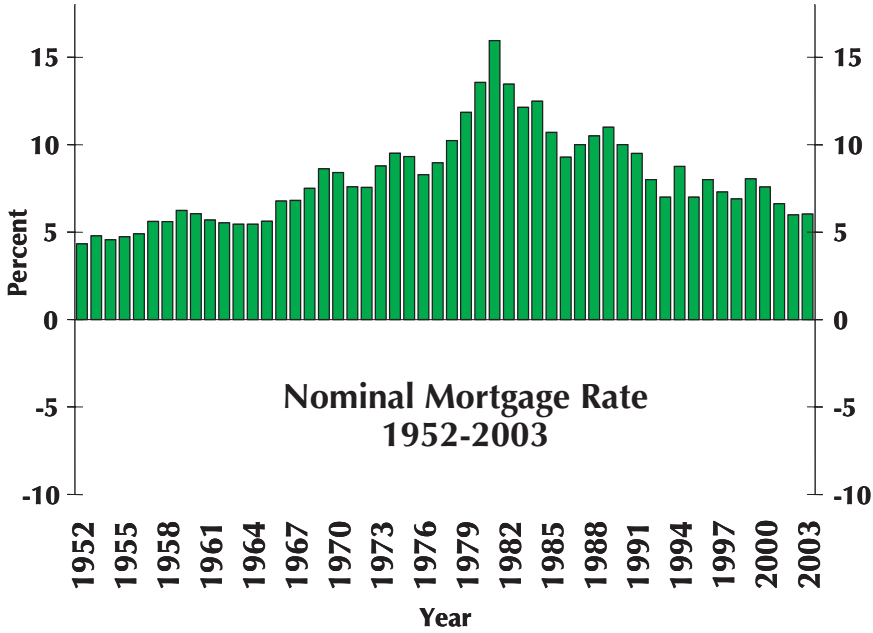
Chart 2 is a plot since 1952 of the Consumer Price Index, which is the standard measure of inflation. Most people, as consumers, think of inflation as prices moving up — and they've moved up by these amounts, year by year, over that fifty-two year period. As investors, we think of inflation not as prices moving up but as the value of money shrinking. This is shown in Chart 3. Same information — different perspective.

Chart 3



Your money, whether it's income or assets, lost value by this rate each year for the last fifty-two years. Over that period of time, what used to be a dollar shrank to about fifteen cents. This is the rate at which our yardstick has been shrinking. If you are talking about investing, everything is measured in dollars which means *it's measured by this yardstick*. The first thing you have to do with those dollars is to adjust them for the shrinking yardstick. Since most people have more experience with real estate (especially homes and mortgages) than with stocks and bonds, we're going to talk about real estate assets and, in particular, mortgages to explain what has happened to the value of your money over the last fifty-two years.

Chart 4



Inflation and Mortgage Rates
Understanding Climate Change

Chart 4 is a plot of the nominal mortgage rate from 1952 to 2003. This is the rate that would have been quoted to you by a bank or a savings and loan organization. In 1951 my father bought a farm and had a 4½% mortgage. All the neighbors said, "Izzy, you'll go broke in the next Depression." There had been a Depression after World War I and everybody expected one after World War II. Even though he put 40% down and financed the other 60% at 4½%, he didn't eat or sleep for two days because this debt scared him to death. Incidentally, his interest cost was less than it cost to rent a house.

In 1971, my wife, Connie, and I bought a house with a 7½% mortgage. Dad said, "Ron, that's awful high." I said, "All I know is that on an after-tax basis this mortgage is costing me no more than the apartment we live in." So, on a month-to-month basis, after taxes, the cost was the same. That's all I knew. Fortunately, that's all I needed to know.

In 1981 my brother, Rod, bought a house with a 14% mortgage. I said, "Rod, that's high." He said, "Don't worry about it. Inflation will go up and take care of me. The price of the house will go up. I'm not worried about it." Think about that. My father feared a 4½% mortgage. My brother did not fear a 14% mortgage. This is a complete reversal of attitude, because of a change in the economic climate.

Chart 5

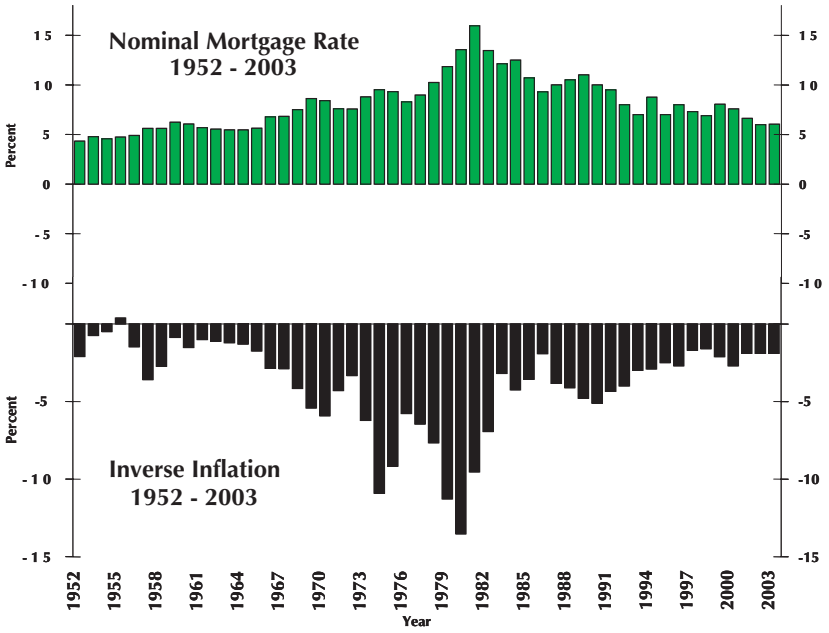
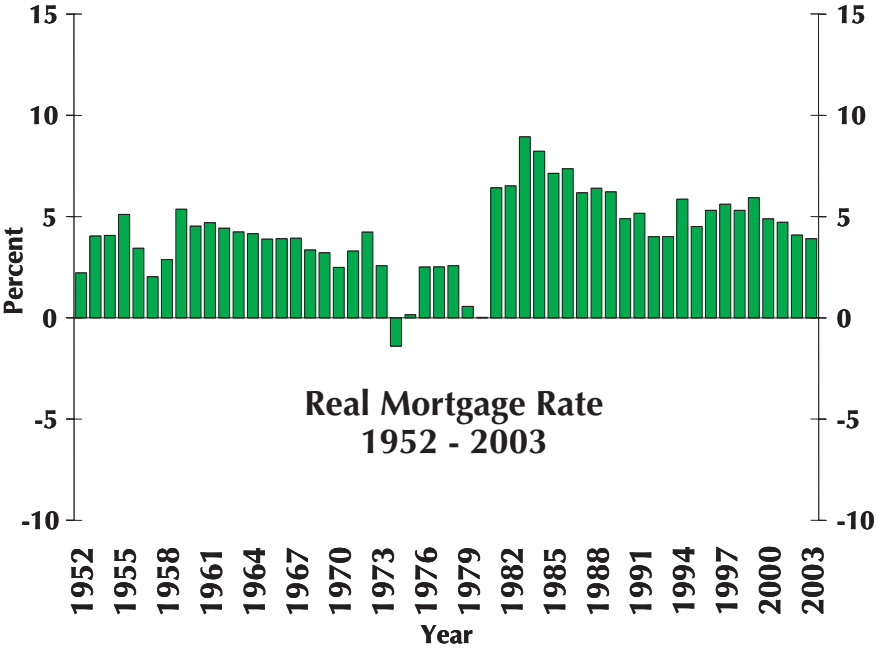


Chart 5 is simply the nominal mortgage rate plotted along with the inverse of inflation. At first glance these charts look a whole lot alike. But, in fact, inflation ran up long before mortgage rates. Then, in the 1980s, inflation ran down quickly and mortgage rates came down gradually. All through the 1970s people said, "Yes, inflation is up, but it will come back down." All through the 1980s people said, "Yes, inflation is down, but it will go back up." There was a huge lag in perception behind reality. Some folks like to say that Wall Street anticipates the future, six months out. And it does, on some things like earnings. But it was a decade late on changes in inflation — changes in the value of money. Perception of inflation, first up and then down, lagged reality by a decade. Those lags can make you (or cost you) an awful lot of money.

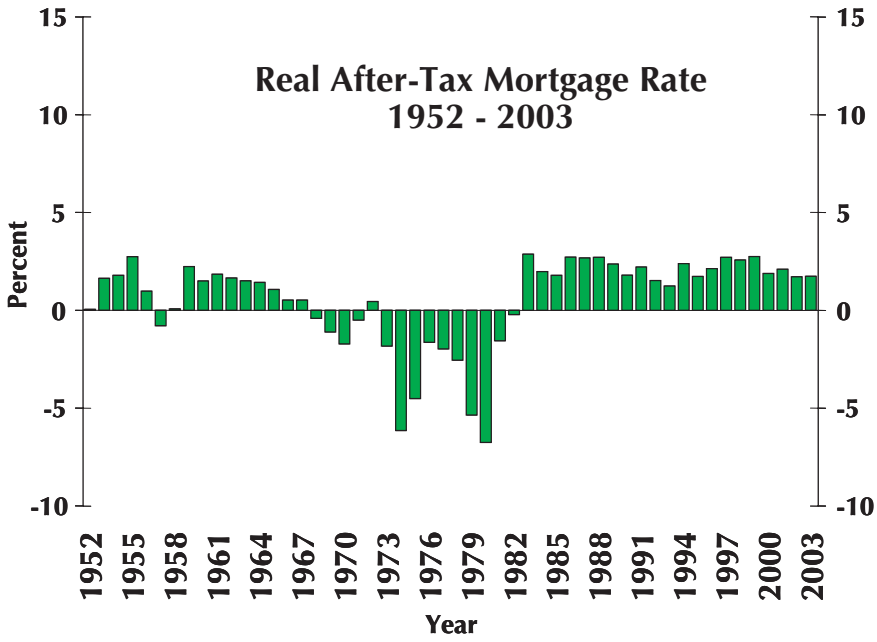
If we net these two charts it looks like Chart 6.

Chart 6



As you know, the interest on mortgages is tax deductible, so if we adjust for taxes, it looks like:

Chart 7



That looks different, doesn't it? We are seeing three different economic climates:

- From 1952 to 1967, long-term debt cost you money. My father's 4½% mortgage, after taxes and inflation, was costing 2%, so we worked like dogs to pay it off early.
- From 1969 to 1981, long-term debt actually made you money. Connie and I bought a house in 1971. Within a short period of time, I realized that the last thing I wanted to do was to pay off my mortgage early. My mortgage was making me money! I wish I had bought a bigger house, with a bigger mortgage. Remember the phrase, "Trade up on the equity?" From 1969 to 1981, the economic climate made borrowing a winning proposition. "Trade up on the equity" worked. But the climate changed again.

- By 1982, borrowing money was once again a liability. My brother's 14% mortgage was costing him money. Within a couple of years, he'd rolled it down to 11%, still costing him money. All through the 1980s he was willing to pay 11% because he assumed that inflation was going back up. He assumed inflation was going back up because he thought what he saw in the 1970s was normal. He didn't realize that the economic climate had changed.

When the Climate Changes, It Changes the Rules

Understanding the climate changes illustrated in Chart 7 is critical to understanding many of the successes and pitfalls of investing for the last fifty years. It is that important. It illustrates why a strategy that works at one time, suddenly doesn't in another. In other words, when the climate changes, it changes the rules. The best thing you and I could do in the 1970s was to borrow money. For most of us, the way to borrow money was to buy real estate. My farmer cousins who bought farmland in the 1970s are millionaires today. Those who started buying farmland in the 1980s went bankrupt. My point is when the climate changes, when the value of the money changes, it changes everything — certainly everything valued in money. You don't have to predict climate changes, but you do have to recognize them.

The Basics of Investing Part 2: The Investing Choices

In *Part 1*, we talked about money, inflation and the economic climate. Now it's time to turn to the question on every investor's mind: How to increase wealth through investing? There are really only three classes of securities: short-term debt, long-term debt and equities (common stock). We will review all three, then show you how to make sense of your choices.

In every investment transaction there are two parties: the lender and the borrower, or the buyer and the seller. When an individual, corporation, or government needs more money than they have, they can take out a loan, issue bonds, or issue stock. But this will only provide money if someone is willing to issue the loan, buy the bond, or buy the stock. The needs of both parties must be met, or the transaction will not take place. So in looking at securities, we must keep both parties in mind.

Investing Choice 1: Short-Term Debt

Short-term debt securities include such things as passbook savings accounts, CD's and Treasury Bills. These investments are considered safe because the principle on passbook savings is often guaranteed by the Federal Government (i.e. the American tax payer) through the FDIC. The interest rates on short-term debt are set by the market, but are heavily influenced by the Federal Reserve Board.

Chart 8

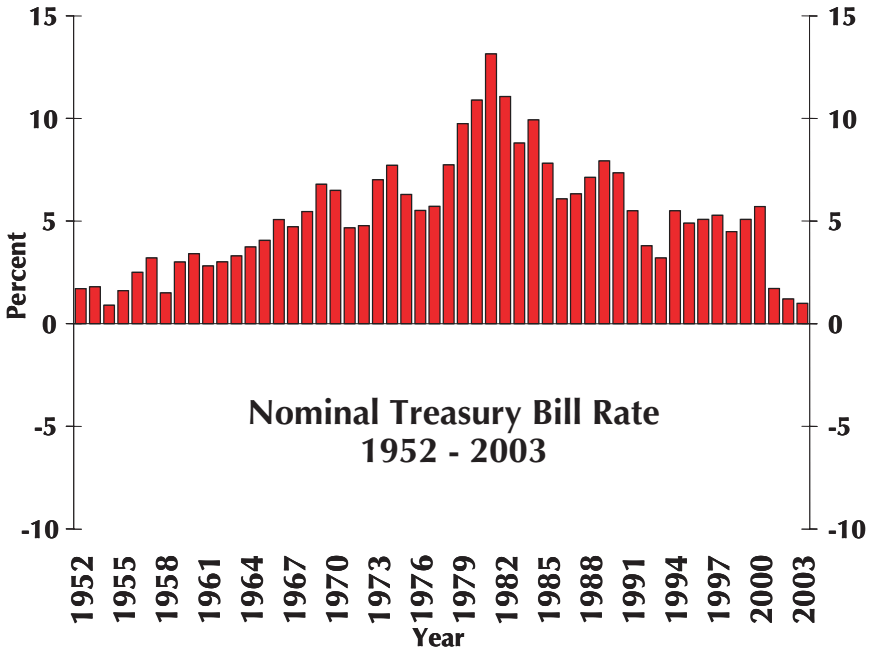
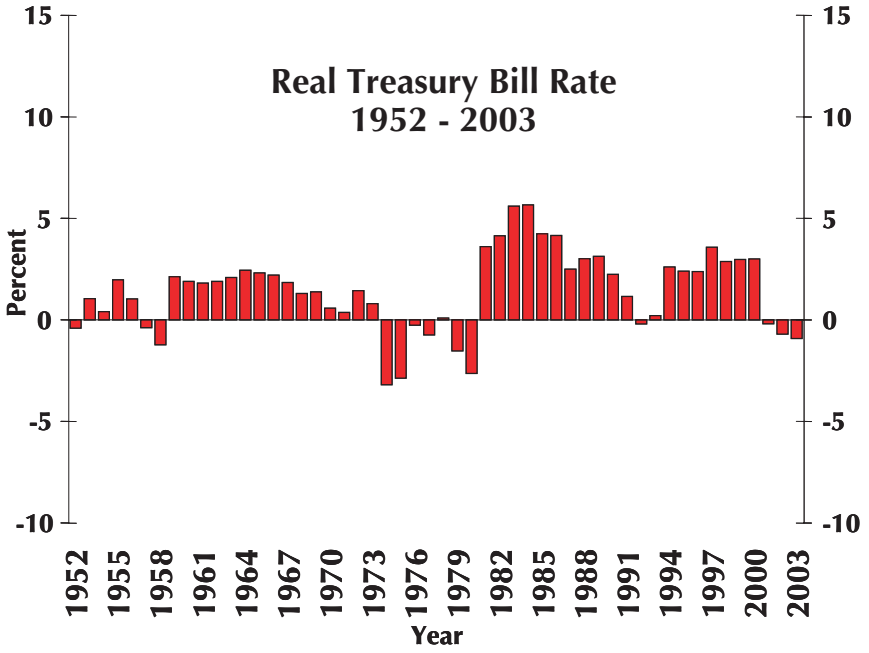


Chart 8 shows the nominal rate on Treasury Bills since 1952. Treasury Bills (T-Bills) are perfectly safe, right? But remember, we need to adjust for inflation. Adjusted for inflation, T-Bills look like Chart 9.

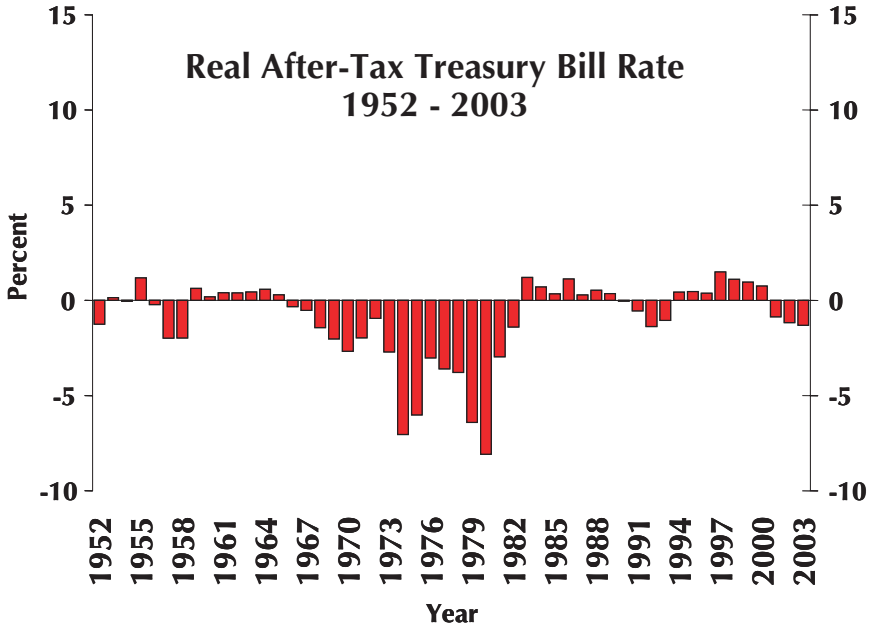
Chart 9



Now T-Bills don't look quite as good. When the Treasury Bill rate is less than inflation, the investor is losing *purchasing power*. In these years, the Treasury Bill principle may be guaranteed in nominal (dollar) terms, but your *purchasing power* is not. When short-term interest rates are lower than inflation, the borrower is actually making money simply by borrowing. The lender is losing money. So at these times, when people fear that the Fed is going to raise interest rates, be aware that it *should* raise interest rates. Interest rates ought to move up to get the inflation-adjusted Treasury Bill rates back to a positive real return.

If you're a taxpayer, we also need to adjust for taxes, which makes T-Bills look like Chart 10.

Chart 10



Notice that this chart shows the same three economic climates we saw in Chart 7 from *The Basics, Part 1*:

- 1952-1967, when inflation was relatively steady and it cost to borrow money;
- 1969-1981, when inflation skyrocketed and it paid to borrow money (but not to lend it); and
- 1982-present, when inflation was back under control and it again cost to borrow money.

In the 1970s, you and I could borrow money at 7½% on a mortgage. After taxes it was costing us less than 5%, even though inflation was 10%, because our mothers and our grandmothers were getting 5¼% on their savings. The money you and I were making on our mortgages, Grandma was losing on her savings account.

After a decade of that, Grandma got tired of losing money, so three things happened:

- In order to stop inflation, we put a new man in the Fed named Paul Volcker;
- Partly to stop inflation, we put a new man in the White House named Ronald Reagan; and
- All our mothers and grandmothers took their money out of passbook savings and put it into 13% money market funds and bankrupted the S&L industry.

"After all, in a Depression, you don't care about the return *on* your money. You care about the return *of* your money!"

I believe that as long as Grandma feared Depression more than she feared inflation, she was willing to keep her money in a guaranteed passbook saving account, even though she was losing money doing it. After a decade of losing money, she came to fear inflation more than Depression and changed where she kept her savings. The first time she moved her money was traumatic. Now, Grandma will go across the street for a nickel or a dime; that is a tenth of a percent. But it took a long time — and it took the fear of inflation becoming greater than the fear of Depression — for her to do that. After all, in a Depression, you don't care about the return *on* your money. You care about the return *of* your money! The pain depicted on Chart 10 in the 1970s finally drove Mom and Grandma to respond to inflation. But, at the same time, we responded to the fear of inflation and we licked it. Inflation went from 13% to 4% in three years. These two actions reversed the climate.

Investing Choice 2: Long-Term Debt

Long-term debt includes such things as Treasury Bonds, corporate bonds, municipal bonds and mortgage-backed securities. These investments are guaranteed by the borrower. The rates on long-term debt are driven by the market. We will look at Treasury Bond rates because they are the benchmark for the rates of other long-term debt securities as well.

Chart 11

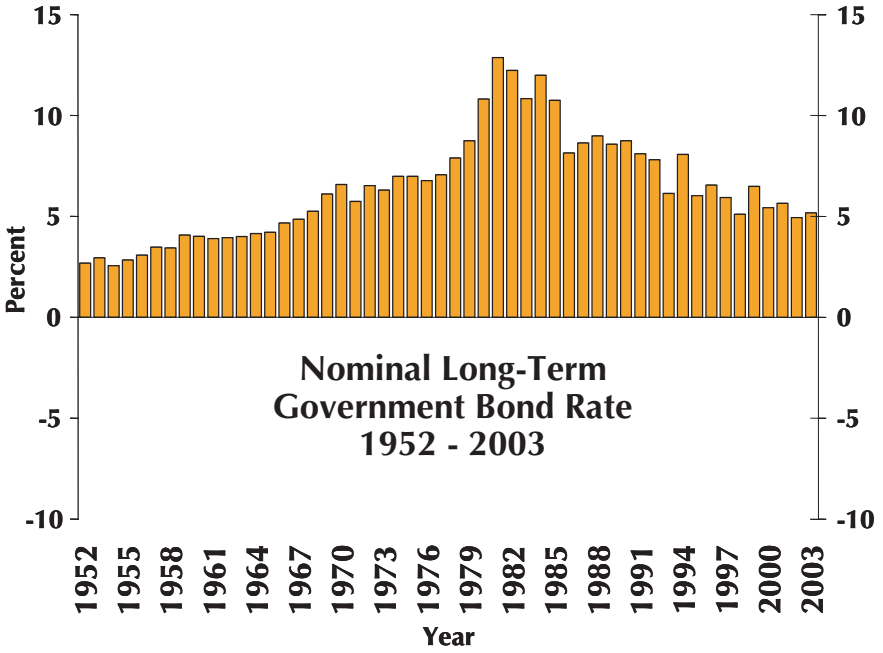
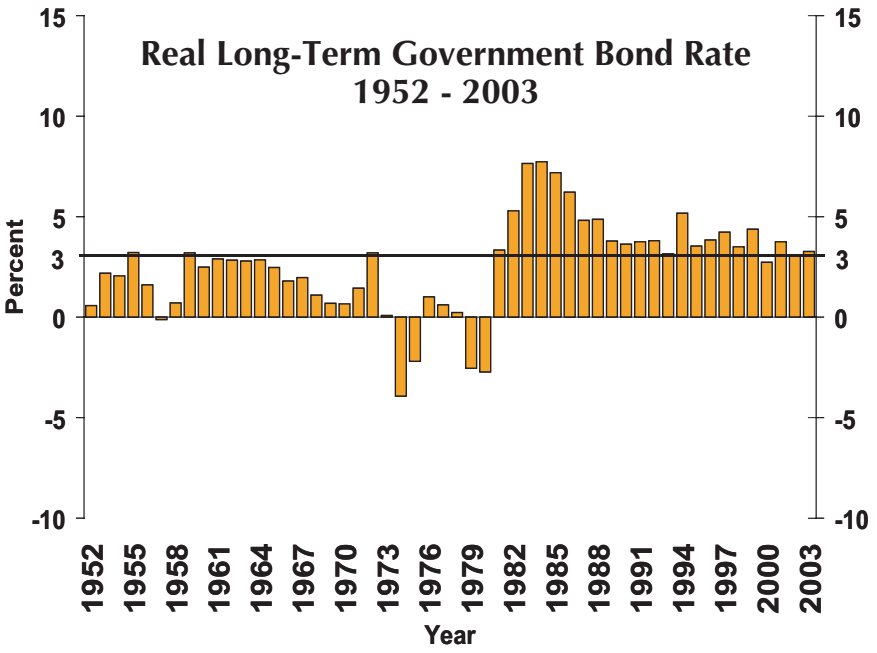


Chart 11 plots the nominal long-term Treasury Bond rate for the last fifty-two years. It looks a whole lot like mortgage rates.

When you adjust for inflation, Treasury Bonds look like Chart 12.

Chart 12



You'll notice on Chart 12 we've drawn a line at three percent. Normally, historically, Treasury Bonds yield 3% over inflation. When interest rates are 3% above inflation, they are fairly priced and you get the coupon. From 1974 to 1981, interest rates were unusually low relative to inflation because Grandma feared Depression and was willing to lend her money cheaply for a "guarantee." From 1982 to 1989, interest rates were unusually high because my brother, the borrower, was willing to pay 14% on his mortgage. This meant that Mom, the lender, could get 11% on her money market fund. (The bank maintains a 3% spread regardless of rate.)

This chart is all you've had to know to make money, or avoid losing money, in bonds for the last fifty years.

In October 1993, based on Chart 12, we said, "Folks, the time to own bonds has just come to an end." Remember when Orange County went bankrupt in 1994 and interest rates jumped about two percent? At the end of 1994 we said that there was a 20% off-sale in the bond market and in the stock market. Today, interest rates on Treasury Bonds are a little higher than they normally should be, but normal here — for long-term bonds — is 3% above inflation.

The period from 1965 to 1993 was dominated by a change in inflation and a lagging perception by bond owners. It probably won't happen again in our lifetime. After all, Mom will now move her money for a dime — and there is no way you are going to get people who now have 7% mortgages to refinance to 11% mortgages.

In the 1970s, people had mortgages at 7% and went out and bought a bigger house with a higher mortgage rate because they assumed inflation would continue and that the value of the house would increase regardless of interest rate. Remember the phrase "Trade up on the equity?" That worked in the 1970s. People still believed it in the 1980s. But from 1990 to 1993, not only did people refinance their mortgages from 11% to 8% (driving Mom's CD from 8% to 5%), but a third of those refinancing went from a 30-year mortgage to a 15-year mortgage. That's the opposite of "Trade up on the equity." That's "Prepay the mortgage." They're now paying twice as much principal every month as they used to!

My mental picture of this is Scrooge McDuck in his counting room — and his money's coming in at twice the rate that it used to and it's piling up! We said in 1990-1991, that within a year, banks would be flush because they're getting all this money in. And since 1992 or '93, every month you get the chance to open more credit card accounts. Banks have been flush since 1993 because people are prepaying the mortgage. Changes in public opinion, or changes in public action, tend to happen in a recession. All through the 1980s, while there was no recession people were happy (or at least they were willing) to pay 11% on a mortgage. Come 1991, we had a recession and people took a hard look at their finances — and that's when they refinanced; they rolled fixed-rate mortgages down from 11% to 8%. Because they are fixed-rate mortgages, they can roll them down again (as they have done in 2002 and 2003), but the bank can't roll them back up.

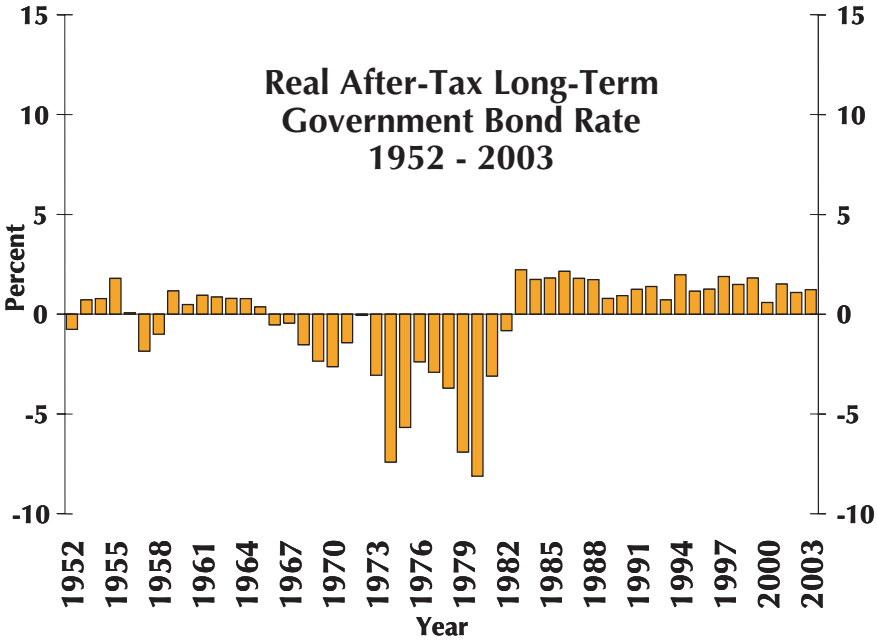
"Changes in public opinion, or changes in public action, tend to happen in a recession."

What we saw from 1990 to 1993 was a change in action by the American public: one-third of sixty million homeowners choosing to pay down the mortgage instead of trading up on the equity. That's important. That was a major change. It drove interest rates back to normal levels in 1993.

Inflation, and people's response to it, was the major driver of stock and bond prices for the last thirty-five years. It's now over, but you've got to understand what happened in order to understand what's happening now.

The majority of long-term bonds are held by pension plans, which are tax free. So the preceding discussion is based on pre-tax, long-term bond rates (Chart 12). If you're a taxpayer, of course, Treasury Bonds look like Chart 13.

Chart 13



Investing Choice 3: Equities (Common Stock)

The third class of securities is equities (or common stock). In this case, instead of borrowing money, a company raises money by selling shares of stock in the company. The stockholder is then an *owner* of the company and shares in the successes of the company (through dividends and capital gains) and the failures of the company (through capital loss). There are no "guarantees." Stock prices are set by the market — what someone is willing to pay to own a piece of a company. Over the long term, the price will reflect the true value of the company, but over the short term, the perceived value of the company may not always reflect the company's true value.

"Corporate stocks provide higher returns than corporate bonds because the company's management works *for* the stockholder and *against* the bondholder."

Corporate stocks provide higher returns than corporate bonds because the company's management works *for* the stockholder and *against* the bondholder. No management will borrow money (i.e. issue bonds) unless it expects to profit from the investment of those funds in its business. Thus, the return on stockholder's equity must be higher than corporate interest rates. Otherwise, management will cease to borrow, driving interest rates down. Similarly, every corporate treasurer has the same incentive you and I have: to save money. They call their high-rate bonds and reissue low-rate bonds — just as we refinance our high-rate mortgages when lower rate mortgages become available.

In this section, we will look at common stock performance over the last fifty-two years. We will also look at several misconceptions about stocks. Then we will move on to compare our three investment choices.

Chart 14

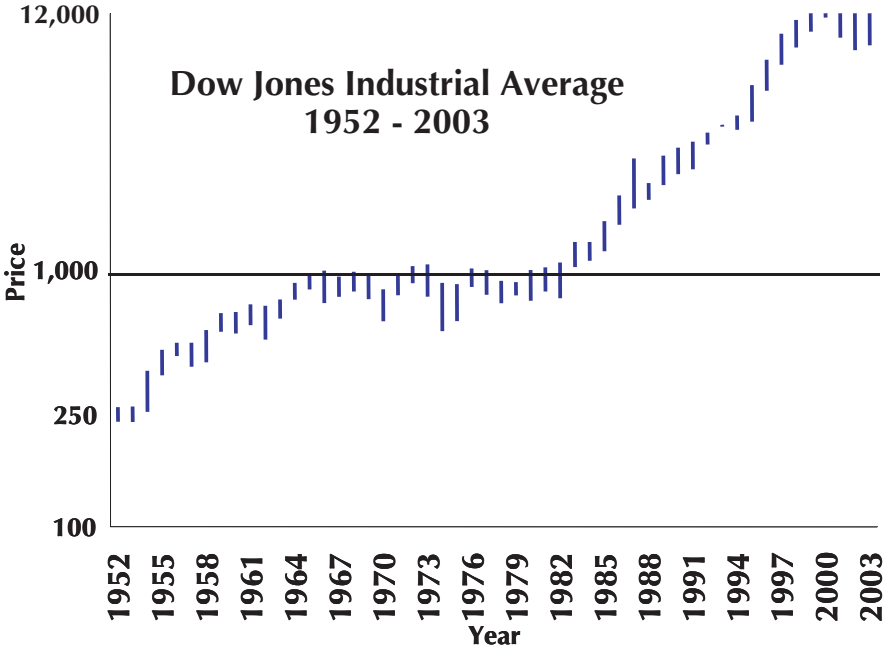
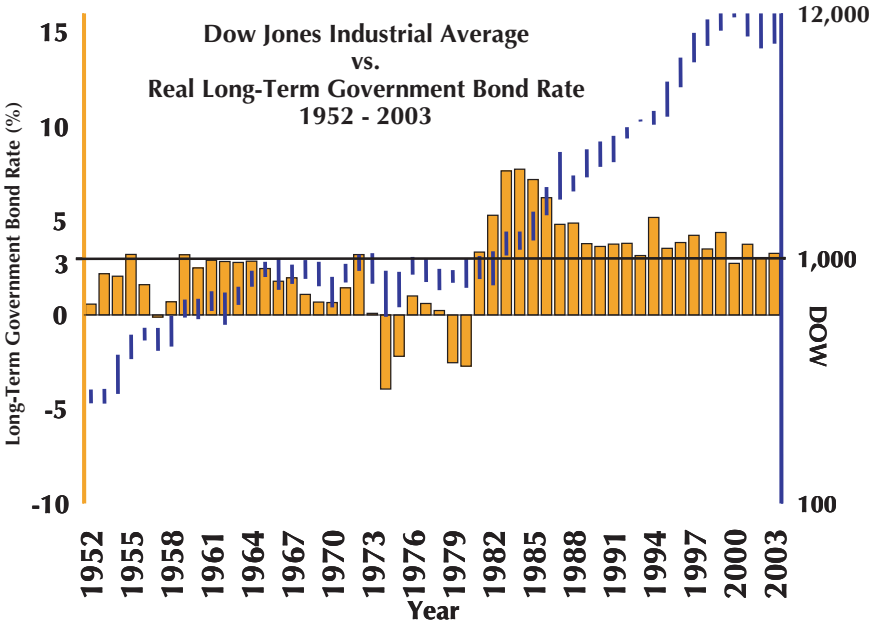


Chart 14 depicts the Dow Jones Industrial Average (DJIA) from 1952 to 2003. 1952 is particularly interesting to me because Dad bought our farm in 1951. From 1952-1965, he'd much rather have owned stocks because they quadrupled. From 1965 to 1982, you'd rather have owned farmland. Stock prices did nothing — you got the dividend, which was about three percent. From 1982 to today, you would rather own stocks; they are up about ten times.

Chart 15



What's interesting is when you place the DJIA chart alongside the Real, Long-Term Government Bond Rate chart as in Chart 15. We said in *Part 1* that when the climate changes, it changes everything. Well, Chart 15 illustrates the climate changes:

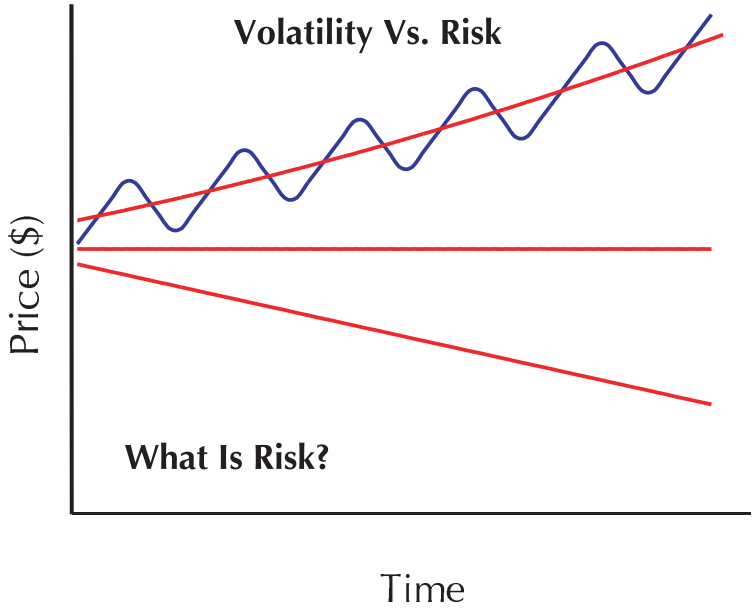
- From 1951 to 1965, you could make 3% on bonds and you could quadruple your money in stocks, so you wanted to own stocks.
- From 1965 to 1982, you didn't want to own stocks or bonds; you wanted to borrow money.
- From 1982 to 1993, you could make good money in bonds or stocks. In fact, stocks continued strong until 2000.

When the climate changes, it changes everything. When the value of the money changes, it changes everything valued in money.

Aren't Stocks "Risky?"

This is a common concern we hear when it comes to stocks. But to address this concern we must ask a question of our own: what is your definition of risk? I suspect for most of you it's the possibility of losing money. My definition of risk is the *probability of losing purchasing power*. That means, to me, inflation is a risk because I'm losing purchasing power. When I say "probability" that simply allows me to look at things from the perspective of a portfolio instead of a single security. So if I own twenty securities and one or two of them go bad, the other eighteen of them can offset the loss. I'm looking at the whole portfolio.

Chart 16

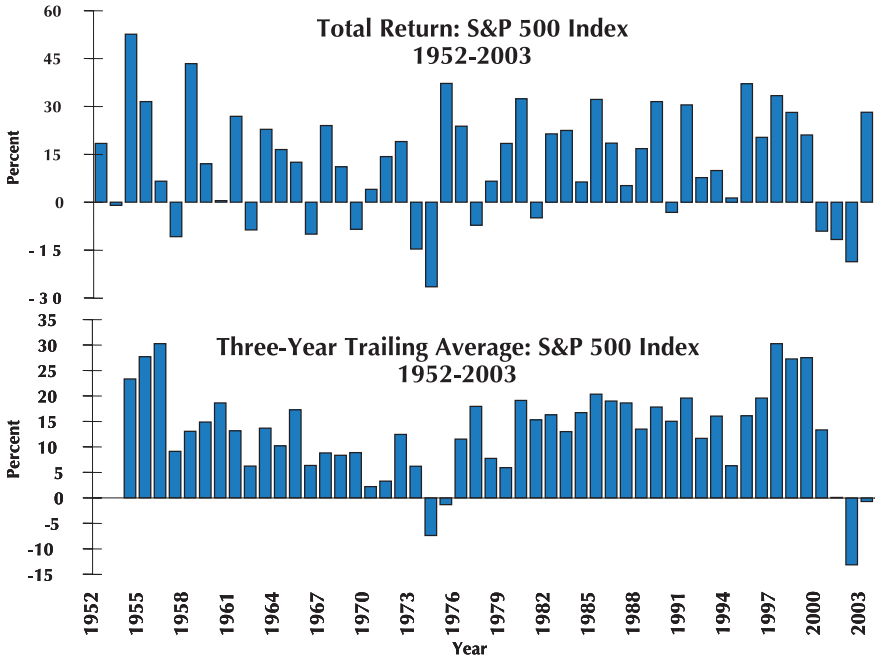


What's Wall Street's definition of risk? Wall Street's definition of risk is volatility. So Wall Street will tell you that the blue line in Chart 16 is riskier than the top red line. I'll buy that. But Wall Street will also tell you that the blue line is riskier than the middle red line and you might be able to squeeze that by me. But Wall Street will also tell you that the blue line is riskier than that bottom red line and I won't buy that at all.

What Wall Street won't tell you is that the bottom red line is available to you, the middle red line is available to you, but the top red line is not. The blue line is available, but the top red line isn't. So now which line do you want? Beware when you are told that stocks are "risky." You need to know what definition is being used. Stocks can be volatile (like the blue line), but let's look at what happens to that volatility over time.

Volatility and Sampling Frequency

Chart 17



What you see on the top plot of Chart 17 is the total return for the S&P 500 over the last fifty-two years. In those fifty-two years there have been thirteen down years. Well, to an old farmer, the pattern of returns looks like spring, summer, fall, winter… spring, summer, fall, winter… In fact, we used to invest on a four-year cycle. The economic cycle was roughly three-to-five years and the market ran on a four-year cycle whether the economy did or not. But if you look at this as an old farmer, you conclude that maybe one year isn't the proper period of time to measure what's going on. So we took the same data, and did a three-year trailing average, which is the lower plot. A lot of the volatility goes away. The only down period is around 1975 when we had the climate change. So if you look at things on a three-year basis, most of the volatility goes away.

In the early 1970s when I worked for an insurance company, people from a major brokerage firm came to see us. They had bought a computer that was programmed for linear regressions. So they plugged in A + B(x) — actually, they got sexy and said Alpha + Beta(x), which is where "Beta" came from — and they looked at prices relative to the S&P 500 or a similar index. I asked them for their formula, they gave it to me, and I sat down with five years of history for a mutual fund that we ran. First I used monthly data, and then I used quarterly data, and ran it through their formula. So, I'm using the same set of data, just two different sampling frequencies. I got two different Beta's. I called up the people and said, "This is what I did; I got two different Beta's. Does that make sense?" They said, "Yes that's what will happen." I said, "But I've got two different Beta's, which one should I use?" They said, "We like the higher number because it's more dramatic." I've been skeptical of "Beta" numbers ever since.

The bottom line is this: if you price your portfolio every day, you are going to get huge volatility. If you price it once a week, you'll get less. If you price it once a quarter, you'll get less. If you price it once a year, you'll get something like the top plot in Chart 17. If you price it once every three years, you'll get the bottom plot and much of the volatility goes away. So the easiest way to lower the volatility of your portfolio is to not price it so often.

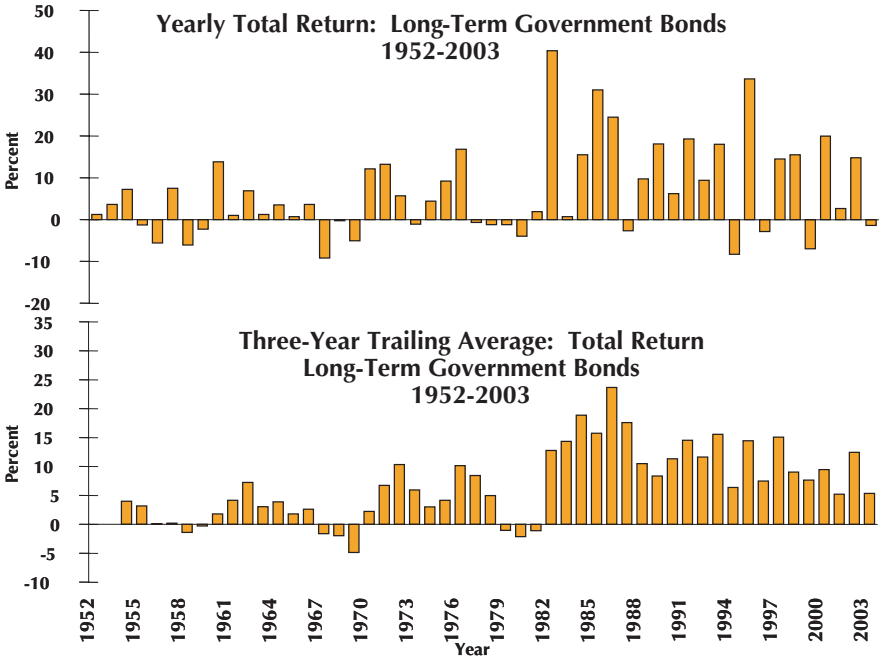
Let's look at volatility one more way. How often do you price your house? Every ten years or so? The implicit assumption is that during those ten years, the price went in a straight line. But, really, the price of your house jumps around a lot more than the price of stocks. Anybody try to sell a house in October 2001? There were no bids. Nobody was interested. In stocks there is always somebody like me with a lowball bid. If you've got your house up for sale and there are no bids, does that mean it's worthless? Or, does it mean that, *today*, you got no bid? People are willing to wait six or nine months to get a good price for their house, but if their stocks drop they panic as if the price meant something. All it means is that somebody is giving you a lowball bid. The point is, risk is a matter of definition — volatility is just one definition and it changes with the sampling frequency.

Volatility and the Media

We'll have a lot of volatility in stocks as long as a whole lot of people watch the market on a daily basis. I've been on the TV shows. How much time do we spend talking about Treasury Bills? Thirty seconds a day? What can you say about Treasury Bills? "They're guaranteed, the yield is 1%." That's all you can say. What can you say about CD's? "The yield is 1%." That's all you can say. What can you say about bonds? "The yield is 4%; we think rates are going up…or we think rates are going down." We can talk about that for two or three minutes. Now we've got eight hours to kill. What can you say about stocks? You can talk endlessly about stocks. So they do — and that adds to volatility. The reason that people talk about stocks is that you can make money in stocks! The volatility is greater because the returns are greater and it gives us something to talk about. But you can only talk about it prospectively.

Every year there are two weeks before the Super Bowl when there's all kind of speculation about who's going to win. What will the point spread be? Five minutes after the game is over, does anybody talk about the Super Bowl? No, now you know! You can't talk about it any more. The reason stocks are so volatile is that we talk about them so much. And we have so many people who have nothing to do but talk about it. And they get paid well to do it. I've been on the shows. You've got to be entertaining. They are in the entertainment business and they will tell you that. During a commercial break I once commented that we put out a quarterly newsletter. The reason that I write a newsletter once a quarter is that if I can say something useful four times a year, I'm doing pretty well. Half of my newsletters say, basically, "See last quarter." I mentioned that and the host said, "Well, we say something useful about four times a year too, but, of course, we're on the air every day." They are in the *entertainment business.* We call that *The Game of the Stock Market*.

Chart 18



So, are stocks risky? The top plot of Chart 18 shows the yearly total return for long-term government bonds. This is nominal, pre-tax and pre-inflation. There have been sixteen down years in bonds. There have been thirteen down years in stocks. There have been more years when bonds were down than when stocks were down. If your definition of risk is the frequency of "down years," then bonds are riskier than stocks.

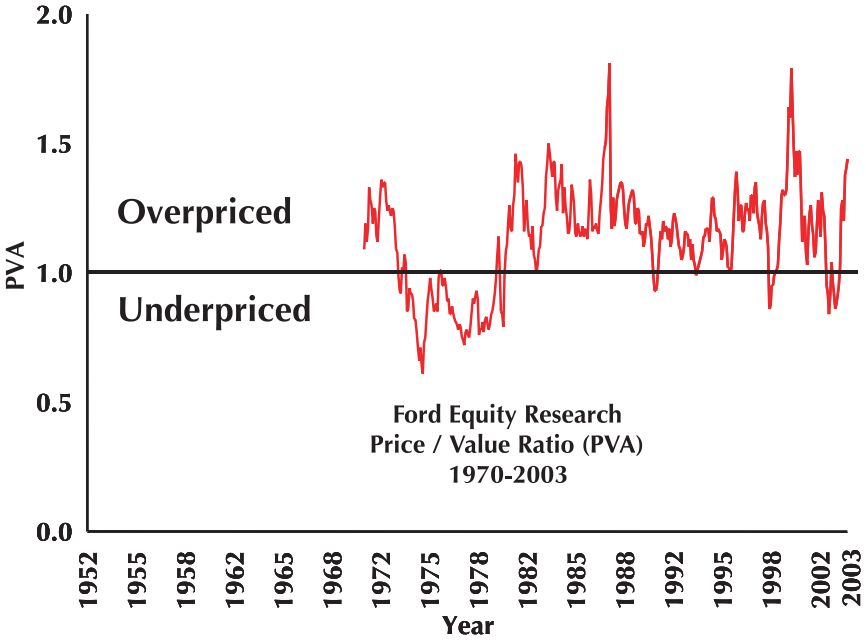
I'm not sure one year is the proper period of time, so we did a three-year trailing average for the bottom plot. Bonds change to seven down years, stocks to three down years. You still have more down periods in bonds than in stocks. If your definition of risk is the frequency of down years, then bonds are riskier than stocks.

Make sure that the definition of risk that people are using makes sense to you, because the definition that Wall Street uses is different from what most people use.

Aren't Stocks Overpriced?

This is another popular concern of investors. But, again, we need to look at how Wall Street determines what is "overpriced." Nearly everyone who has done rigorous work over any period of time assesses the values of common stocks based on current interest rates. They use a dividend discount model or models similar to it. One outfit that has been doing such research for over thirty years is Ford Equity Research. They started with two thousand stocks and today it's over four thousand, so it's statistically significant. Every month they calculate the value of over four thousand stocks, compare it to current long-term interest rates and get a price/value ratio for each of those stocks. Then, they average it over the four thousand stocks; the resulting price/value ratio (PVA) is pictured in Chart 19.

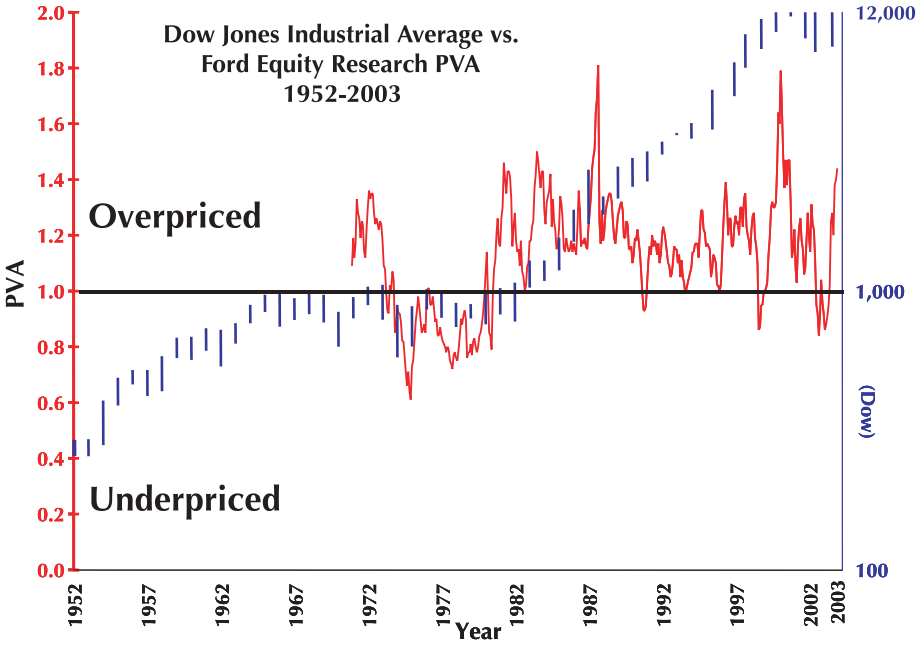
Chart 19



When the PVA is greater than one, they say the stocks are overpriced. When the PVA is under one, they say the stocks are underpriced.

The only problem is that in 1971-72, when they said stocks were overpriced, stocks went up (see Chart 20). During the period of 1972-1982, when they said stocks were underpriced, they did nothing. Since 1982, except for a little bit in the Gulf War and a little bit when Long-Term Capital hit the fan, nearly all the time they said that stocks were overpriced — and stocks went up by a factor of ten! They've been dead wrong for nearly twenty years and haven't bothered to change the formula.

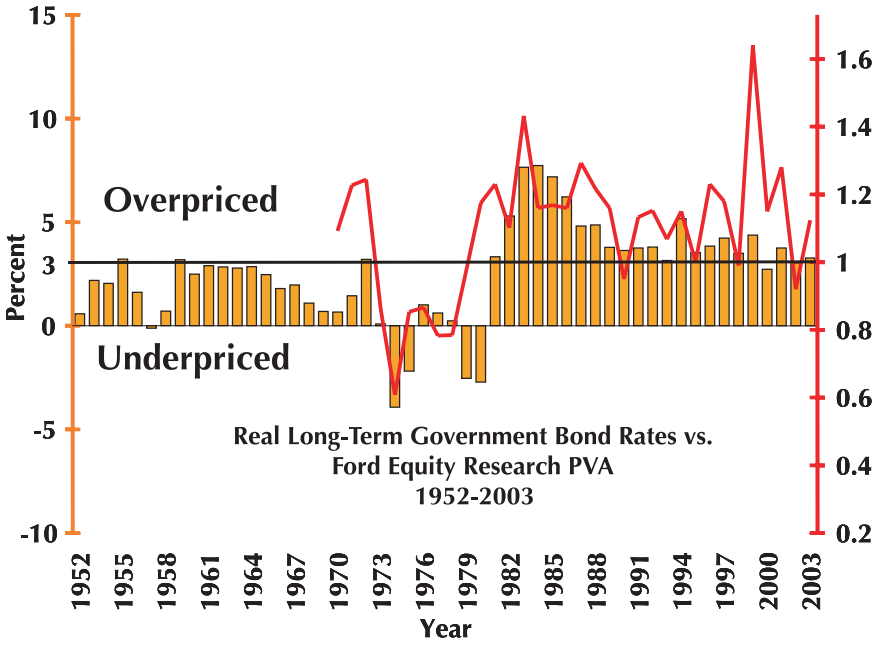
Chart 20



Remember, they're saying that stocks are underpriced or overpriced *based on current interest rates* (i.e. relative to bonds).

So let's look at the PVA and interest rates (Chart 21). From 1972 to 1982 when interest rates were unusually low, they said stocks were underpriced — *relative to bonds*. From 1982 to 1990, when interest rates were unusually high, they said stocks were overpriced — *relative to bonds*. Their assumption is that bonds are always fairly priced — that there's no hope, nor fear in the bond market, as if my Father didn't fear Depression, nor my brother assume inflation. As we've seen, that's nonsense.

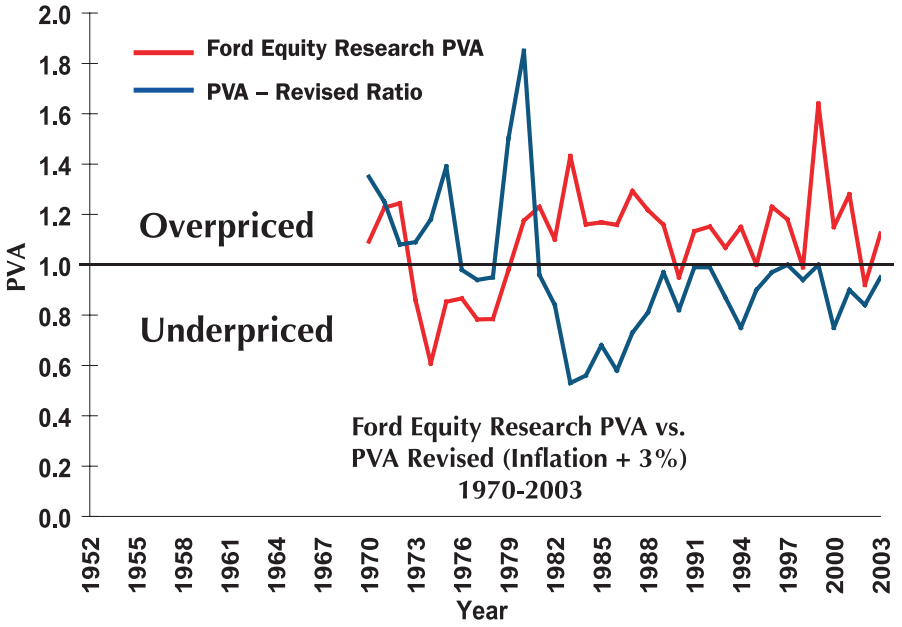
Chart 21



We asked Ford Equity Research to make one change in their calculations. Instead of using a current interest rate, we asked them to use inflation plus 3%. (In Chart 21, this would be depicted as using the horizontal line at 3% "real" interest rates instead of the actual real rate each year as depicted in the bar chart.)

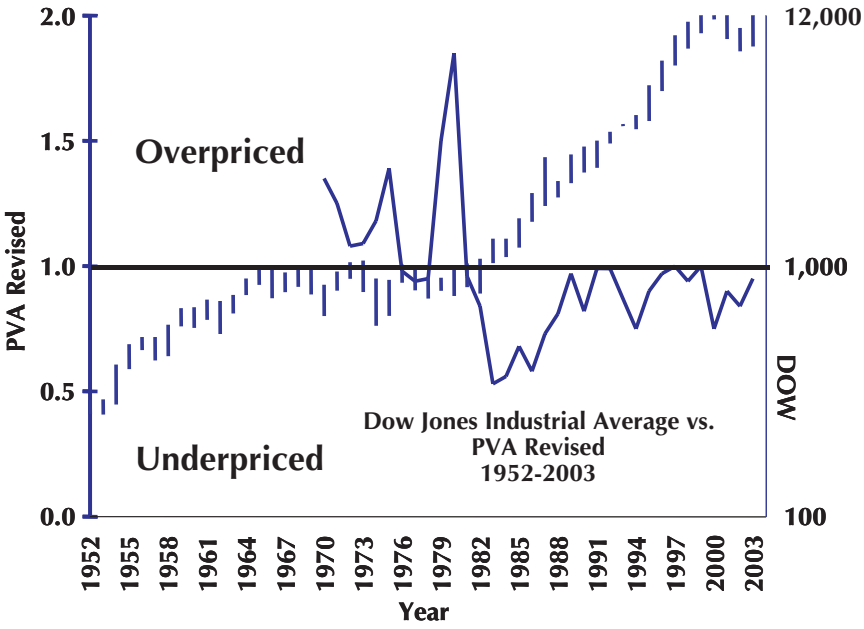
When they re-ran their model, they got the blue line in Chart 22. It reversed their conclusions! In 1972-1982, when they had said stocks were underpriced, the blue line says they were overpriced. In the early 1980s, when they had said stocks were 20%-30% overpriced, the blue line says they were 50% underpriced.

Chart 22



If we compare the revised PVA to the DJIA to see what stocks actually did (Chart 23), we see that using inflation plus 3% as a discount rate is a much more useful tool when deciding when stocks are overpriced or underpriced.

Chart 23



Remember, whenever people say stocks are underpriced or overpriced, they need to finish the sentence. They're really saying stocks are overpriced or underpriced *relative to bonds.* But in stocks, just as in bonds, you have to account for the value of money. Everything measured in dollars is measured by the inflation yardstick. You have to take inflation into account when evaluating both stocks and bonds.

One more point: the PVA is an assessment of the average stock. When stocks, on average, are fairly priced, there can be a huge disparity in individual stocks between those that are overpriced and underpriced. This is a stockpicker's dream. This is where the good stockpicker can make good money.

Making Sense of the Choices

Chart 24

Ibbotson Associates
Stocks, Bonds, Bills, and Inflation
Year-end 1925–2003

Chart 24 lets us compare stocks, bonds, T-Bills and inflation since 1925. Since 1925 we've had several wars, we've had a Depression, we've had inflation — we've had most of the troubles that hit mankind. This chart says inflation averaged 3.0%. (Today, we are at 2.0%.) It says that Treasury Bills have averaged 3.7% for a "real" 0.7%. Government bonds averaged about 5.4% for a "real" 2.4%. We're back to that. Large company stocks did 10.4%, and small company stocks did a little better. It's a beautiful chart, right? But it's totally useless! What's wrong with this chart? You can't spend that money: it's pre-tax and pre-inflation. A couple of years ago, they finally started printing a useful chart.

Chart 25

Ibbotson Associates

Stocks, Bonds, and Bills after Taxes and Inflation
Year-end 1925–2003

Chart 25 is the same data, but adjusted for taxes and inflation. Does this chart look a little different? This chart shows what has happened to your dollar since 1925.

If you put your money in Treasury Bills… You can't lose money in Treasury Bills, right? They are perfectly safe, guaranteed by the Federal government. If you put your money in T-Bills, paid your taxes and never spent a dime, the purchasing power of your dollar went to fifty-two cents — *guaranteed.*

If you owned government bonds, paid your taxes and never spent a dime — never spent any of the "income" — your dollar went to $1.99. It did 0.9% per year. If you owned municipal bonds, it did just a shade better than that.

If you owned stocks, your dollar went to $38.42 — which is a 4.8% annual rate.

This chart says, to me, that if it's "guaranteed," most of the time, it's guaranteed to lose you money. There have been two periods of time during this seventy-five year period when you could make money in bonds.

- One was in the Depression. If you think that we're in a Depression, don't own anything but Treasury Bonds.

- The other period of time was from 1982 to 2002. When interest rates go from 13% to 5%, you can make money on bonds. They are now at 5% and they might go to 4½%. The game in bonds is pretty much over.

Stocks have been kind of choppy, but over the last seventy-five years have averaged 4.8%. So, we need to look at the economic climate to make sense of the choices.

In a Depression, bonds look good. But I have concluded that we're not in a Depression.

I hope that the period from 1940 to 1945, WWII, was a little unusual.

If you are experiencing the kind of inflation and low interest rates that we saw in the 1970s, you want to borrow money. But today, we fear inflation and would risk recession before we would allow the inflation of the 1970s again.

If you had to draw a parallel to today, a period of time when inflation was relatively low and fairly stable, interest rates were fair and fairly stable, and stock prices were fair, take a look at the 1960s. Back in the 1960s, you had your choice of making money in stocks, in a jagged fashion, or losing money consistently — in bonds.

What's Available Today?

The point I want to make is that the real choices that are available to you today are depicted in Chart 26.

Chart 26

Available Returns (%)

	Nominal	After-Tax	Real After-Tax
Short-Term Debt	1	.65	-.85
Long-Term Debt	5	3.2	1.7
Equity	8	6.8	5.3

On short-term debt you can get something like 1%. If you are in the 35% tax bracket you get to keep 65%, so it's .65%. If inflation is 1½ %, then you net a *loss* of .85%. If you buy Treasury Bills today and you pay your taxes, you are guaranteed to lose money — at a modest rate, but you are *guaranteed* to lose money.

With long-term debt, rates are about 5%. You can get a good corporate bond at 5%. If you pay taxes at 35%, you get to keep 65% of it… that takes you to 3.2%, minus 1½% for inflation and you get to keep 1.7%. That's a little above the historic rate. If you buy municipal bonds, which aren't on here, the nominal rate is 4.6%, the after-tax rate is 4.6%, so for the real rate, you take 1½% off of that and you get 3.1%. So for most taxpayers, those in the 35% tax bracket, "muni's" look a little better than "corporate's," and "corporate's" look better than cash.

Stocks are priced to do about 8%. We have done a pretty good job of managing the taxes; long-term capital gains are at 15%, so of the 8%, you keep 6.8%. Subtract 1½% for inflation and you get to keep 5.3%.

Your choices today are short-term debt, long-term debt, and equity. These numbers are pretty close to what they have averaged over the past seventy-five years. The difference, of course, is that equity gains come in spurts.

We conclude that there is some value in bonds, not a lot, but they are better than cash. For most people "muni's" are a little better than "corporate's." But we like the returns of 5.3% from stocks a whole lot better than 1.1% on bonds, or a minus .85% on "cash."

The Basics of Investing

What works? What doesn't? and Why?

In *Part 1*, we learned that to understand anything measured in money, you have to understand inflation, because inflation changes the value of your "money-yardstick." We learned that for the last fifty years, changes in inflation have been the primary driver of major market changes. So to understand today's market, we need to understand today's economic climate. If you understand the climate, the investment market makes a lot more sense.

In *Part 2*, we learned that every investment is a transaction between two parties. There are three types of securities: short-term debt, long-term debt and equities (stocks). Over the last fifty-plus years, changes in economic climate have made choices among these three more or less profitable. We learned that though short- and long-term debt are often marketed as "safe," when you take inflation and taxes into account, there have been many years in the last fifty years where you have lost money in bonds and bills.

We learned that stocks, on average, have shown better gains over the last fifty (and seventy-five) years than T-Bills and bonds. We have learned that stock "risk" is a matter of definition and stock "volatility" is a function of sampling frequency (how often you price your stocks). We have learned that many of the models that evaluate stock prices do not take inflation into account and therefore are highly suspect.

So when the media tells you something is risky, volatile or overpriced, ask questions. They are in the entertainment business. You want to be in the investment business…the business of growing your wealth.

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