

## CHAPTER 2

### *The Investor and Inflation*

*I*nflation, and the fight against it, has been very much in the public's mind in recent years. The shrinkage in the purchasing power of the dollar in the past, and particularly the fear (or hope by speculators) of a serious further decline in the future, has greatly influenced the thinking of Wall Street. It is clear that those with a fixed dollar income will suffer when the cost of living advances, and the same applies to a fixed amount of dollar principal. Holders of stocks, on the other hand, have the possibility that a loss of the dollar's purchasing power may be offset by advances in their dividends and the prices of their shares.

On the basis of these undeniable facts many financial authorities have concluded that (1) bonds are an inherently undesirable form of investment, and (2) consequently, common stocks are by their very nature more desirable investments than bonds. We have heard of charitable institutions being advised that their portfolios should consist 100% of stocks and zero percent of bonds.\* This is quite a reversal from the earlier days when trust investments were

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\* By the late 1990s, this advice—which can be appropriate for a foundation or endowment with an infinitely long investment horizon—had spread to individual investors, whose life spans are finite. In the 1994 edition of his influential book, *Stocks for the Long Run*, finance professor Jeremy Siegel of the Wharton School recommended that “risk-taking” investors should buy on margin, borrowing more than a third of their net worth to sink 135% of their assets into stocks. Even government officials got in on the act: In February 1999, the Honorable Richard Dixon, state treasurer of Maryland, told the audience at an investment conference: “It doesn't make any sense for anyone to have any money in a bond fund.”

restricted by law to high-grade bonds (and a few choice preferred stocks).

Our readers must have enough intelligence to recognize that even high-quality stocks cannot be a better purchase than bonds *under all conditions*—i.e., regardless of how high the stock market may be and how low the current dividend return compared with the rates available on bonds. A statement of this kind would be as absurd as was the contrary one—too often heard years ago—that any bond is safer than any stock. In this chapter we shall try to apply various measurements to the inflation factor, in order to reach some conclusions as to the extent to which the investor may wisely be influenced by expectations regarding future rises in the price level.

In this matter, as in so many others in finance, we must base our views of future policy on a knowledge of past experience. Is inflation something new for this country, at least in the serious form it has taken since 1965? If we have seen comparable (or worse) inflations in living experience, what lessons can be learned from them in confronting the inflation of today? Let us start with Table 2-1, a condensed historical tabulation that contains much information about changes in the general price level and concomitant changes in the earnings and market value of common stocks. Our figures will begin with 1915, and thus cover 55 years, presented at five-year intervals. (We use 1946 instead of 1945 to avoid the last year of wartime price controls.)

The first thing we notice is that we have had inflation in the past—lots of it. The largest five-year dose was between 1915 and 1920, when the cost of living nearly doubled. This compares with the advance of 15% between 1965 and 1970. In between, we have had three periods of declining prices and then six of advances at varying rates, some rather small. On this showing, the investor should clearly allow for the probability of continuing or recurrent inflation to come.

Can we tell what the rate of inflation is likely to be? No clear answer is suggested by our table; it shows variations of all sorts. It would seem sensible, however, to take our cue from the rather consistent record of the past 20 years. The average annual rise in the consumer price level for this period has been 2.5%; that for 1965–1970 was 4.5%; that for 1970 alone was 5.4%. Official govern-

**TABLE 2-1 The General Price Level, Stock Earnings, and Stock Prices at Five-Year Intervals, 1915-1970**

Year	Price Level <sup>a</sup>		S & P 500-Stock Index <sup>b</sup>		Percent Change from Previous Level			
	Wholesale	Consumer	Earnings	Price	Wholesale Prices	Consumer Prices	Stock Earnings	Stock Prices
1915	38.0	35.4		8.31				
1920	84.5	69.8		7.98	+96.0%	+96.8%		- 4.0%
1925	56.6	61.1	1.24	11.15	-33.4	-12.4		+ 41.5
1930	47.3	58.2	.97	21.63	-16.5	- 4.7	- 21.9%	+ 88.0
1935	43.8	47.8	.76	15.47	- 7.4	-18.0	- 21.6	- 26.0
1940	43.0	48.8	1.05	11.02	- 0.2	+ 2.1	+ 33.1	- 28.8
1946 <sup>c</sup>	66.1	68.0	1.06	17.08	+53.7	+40.0	+ 1.0	+ 55.0
1950	86.8	83.8	2.84	18.40	+31.5	+23.1	+168.0	+ 21.4
1955	97.2	93.3	3.62	40.49	+ 6.2	+11.4	+ 27.4	+121.0
1960	100.7	103.1	3.27	55.85	+ 9.2	+10.5	- 9.7	+ 38.0
1965	102.5	109.9	5.19	88.17	+ 1.8	+ 6.6	+ 58.8	+ 57.0
1970	117.5	134.0	5.36	92.15	+14.6	+21.9	+ 3.3	+ 4.4

<sup>a</sup> Annual averages. For price level 1957 = 100 in table; but using new base, 1967 = 100, the average for 1970 is 116.3 for consumers' prices and 110.4 for wholesale prices for the stock index.

<sup>b</sup> 1941-1943 average = 10.

<sup>c</sup> 1946 used, to avoid price controls.



ment policy has been strongly against large-scale inflation, and there are some reasons to believe that Federal policies will be more effective in the future than in recent years.\* We think it would be reasonable for an investor at this point to base his thinking and decisions on a *probable* (far from certain) rate of future inflation of, say, 3% per annum. (This would compare with an annual rate of about 2½% for the entire period 1915–1970.)<sup>i</sup>

What would be the implications of such an advance? It would eat up, in higher living costs, about one-half the income now obtainable on good medium-term tax-free bonds (or our assumed after-tax equivalent from high-grade corporate bonds). This would be a serious shrinkage, but it should not be exaggerated. It would not mean that the true value, or the purchasing power, of the investor's fortune need be reduced over the years. If he spent half his interest income after taxes he would maintain this buying power intact, even against a 3% annual inflation.

But the next question, naturally, is, "Can the investor be reasonably sure of doing better by buying and holding other things than high-grade bonds, even at the unprecedented rate of return offered in 1970–1971?" Would not, for example, an all-stock program be preferable to a part-bond, part-stock program? Do not common stocks have a built-in protection against inflation, and are they not almost certain to give a better return over the years than will bonds? Have not in fact stocks treated the investor far better than have bonds over the 55-year period of our study?

The answer to these questions is somewhat complicated. Common stocks have indeed done better than bonds over a long period of time in the past. The rise of the DJIA from an average of 77 in 1915 to an average of 753 in 1970 works out at an annual compounded rate of just about 4%, to which we may add another 4% for average dividend return. (The corresponding figures for the S & P composite are about the same.) These combined figures of 8%

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\* This is one of Graham's rare misjudgments. In 1973, just two years after President Richard Nixon imposed wage and price controls, inflation hit 8.7%, its highest level since the end of World War II. The decade from 1973 through 1982 was the most inflationary in modern American history, as the cost of living more than doubled.

per year are of course much better than the return enjoyed from bonds over the same 55-year period. But they do not exceed that *now* offered by high-grade bonds. This brings us to the next logical question: Is there a persuasive reason to believe that common stocks are likely to do much better in future years than they have in the last five and one-half decades?

Our answer to this crucial question must be a flat *no*. Common stocks *may* do better in the future than in the past, but they are far from certain to do so. We must deal here with two different time elements in investment results. The first covers what is likely to occur over the long-term future—say, the next 25 years. The second applies to what is likely to happen to the investor—both financially and psychologically—over short or intermediate periods, say five years or less. His frame of mind, his hopes and apprehensions, his satisfaction or discontent with what he has done, above all his decisions what to do next, are all determined not in the retrospect of a lifetime of investment but rather by his experience from year to year.

On this point we can be categorical. There is no close time connection between inflationary (or deflationary) conditions and the movement of common-stock earnings and prices. The obvious example is the recent period, 1966–1970. The rise in the cost of living was 22%, the largest in a five-year period since 1946–1950. But both stock earnings and stock prices as a whole have declined since 1965. There are similar contradictions in both directions in the record of previous five-year periods.

## **Inflation and Corporate Earnings**

Another and highly important approach to the subject is by a study of the earnings rate on capital shown by American business. This has fluctuated, of course, with the general rate of economic activity, but it has shown no general tendency to advance with wholesale prices or the cost of living. Actually this rate has fallen rather markedly in the past twenty years in spite of the inflation of the period. (To some degree the decline was due to the charging of more liberal depreciation rates. See Table 2-2.) Our extended studies have led to the conclusion that the investor cannot count on much above the recent five-year rate earned on the DJIA group—



about 10% on net tangible assets (book value) behind the shares.<sup>2</sup> Since the market value of these issues is well above their book value—say, 900 market vs. 560 book in mid-1971—the earnings on current market price work out only at some 6¼%. (This relationship is generally expressed in the reverse, or “times earnings,” manner—e.g., that the DJIA price of 900 equals 18 times the actual earnings for the 12 months ended June 1971.)

Our figures gear in directly with the suggestion in the previous chapter\* that the investor may assume an average dividend return of about 3.5% on the market value of his stocks, plus an appreciation of, say, 4% annually resulting from reinvested profits. (Note that each dollar added to book value is here assumed to increase the market price by about \$1.60.)

The reader will object that in the end our calculations make no allowance for an increase in common-stock earnings and values to result from our projected 3% annual inflation. Our justification is the absence of any sign that the inflation of a comparable amount in the past has had any *direct* effect on reported per-share earnings. The cold figures demonstrate that *all* the large gain in the earnings of the DJIA unit in the past 20 years was due to a proportionately large growth of invested capital coming from reinvested profits. If inflation had operated as a separate favorable factor, its effect would have been to increase the “value” of previously existing capital; this in turn should increase the rate of earnings on such old capital and therefore on the old and new capital combined. But nothing of the kind actually happened in the past 20 years, during which the wholesale price level has advanced nearly 40%. (Business earnings should be influenced more by wholesale prices than by “consumer prices.”) The only way that inflation can add to common stock values is by raising the rate of earnings on capital investment. On the basis of the past record this has not been the case.

In the economic cycles of the past, good business was accompanied by a rising price level and poor business by falling prices. It was generally felt that “a little inflation” was helpful to business profits. This view is not contradicted by the history of 1950–1970,

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\* See p. 25.

which reveals a combination of generally continued prosperity and generally rising prices. But the figures indicate that the effect of all this on the *earning power* of common-stock capital ("equity capital") has been quite limited; in fact it has not even served to maintain the rate of earnings on the investment. Clearly there have been important offsetting influences which have prevented any increase in the real profitability of American corporations as a whole. Perhaps the most important of these have been (1) a rise in wage rates exceeding the gains in productivity, and (2) the need for huge amounts of new capital, thus holding down the ratio of sales to capital employed.

Our figures in Table 2-2 indicate that so far from inflation having benefited our corporations and their shareholders, its effect has been quite the opposite. The most striking figures in our table are those for the growth of corporate debt between 1950 and 1969. It is surprising how little attention has been paid by economists and by Wall Street to this development. The debt of corporations has expanded nearly fivefold while their profits before taxes a little more than doubled. With the great rise in interest rates during this period, it is evident that the aggregate corporate debt is now an

**TABLE 2-2 Corporate Debt, Profits, and Earnings on Capital, 1950-1969**

Year	Net Corporate Debt (billions)	Corporate Profits		Percent Earned on Capital	
		Before Income Tax (millions)	After Tax (millions)	S & P Data <sup>a</sup>	Other Data <sup>b</sup>
1950	\$140.2	\$42.6	\$17.8	18.3%	15.0%
1955	212.1	48.6	27.0	18.3	12.9
1960	302.8	49.7	26.7	10.4	9.1
1965	453.3	77.8	46.5	10.8	11.8
1969	692.9	91.2	48.5	11.8	11.3

<sup>a</sup> Earnings of Standard & Poor's industrial index divided by average book value for year.

<sup>b</sup> Figures for 1950 and 1955 from Cottle and Whitman; those for 1960-1969 from *Fortune*.



adverse economic factor of some magnitude and a real problem for many individual enterprises. (Note that in 1950 net earnings after interest but before income tax were about 30% of corporate debt, while in 1969 they were only 13.2% of debt. The 1970 ratio must have been even less satisfactory.) In sum it appears that a significant part of the 11% being earned on corporate equities as a whole is accomplished by the use of a large amount of new debt costing 4% or less after tax credit. If our corporations had maintained the debt ratio of 1950, their earnings rate on stock capital would have fallen still lower, in spite of the inflation.

The stock market has considered that the public-utility enterprises have been a chief victim of inflation, being caught between a great advance in the cost of borrowed money and the difficulty of raising the rates charged under the regulatory process. But this may be the place to remark that the very fact that the unit costs of electricity, gas, and telephone services have advanced so much less than the general price index puts these companies in a strong strategic position for the future.<sup>3</sup> They are entitled by law to charge rates sufficient for an adequate return on their invested capital, and this will probably protect their shareholders in the future as it has in the inflations of the past.

All of the above brings us back to our conclusion that the investor has no sound basis for expecting more than an average overall return of, say, 8% on a portfolio of DJIA-type common stocks purchased at the late 1971 price level. But even if these expectations should prove to be understated by a substantial amount, the case would not be made for an all-stock investment program. If there is one thing guaranteed for the future, it is that the earnings and average annual market value of a stock portfolio will *not* grow at the uniform rate of 4%, or any other figure. In the memorable words of the elder J. P. Morgan, "*They will fluctuate.*"\* This means, first, that the common-stock buyer at today's prices—

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\* John Pierpont Morgan was the most powerful financier of the late nineteenth and early twentieth centuries. Because of his vast influence, he was constantly asked what the stock market would do next. Morgan developed a mercifully short and unfailingly accurate answer: "It will fluctuate." See Jean Strouse, *Morgan: American Financier* (Random House, 1999), p. 11.



or tomorrow's—will be running a real risk of having unsatisfactory results therefrom over a period of years. It took 25 years for General Electric (and the DJIA itself) to recover the ground lost in the 1929–1932 debacle. Besides that, if the investor concentrates his portfolio on common stocks he is very likely to be led astray either by exhilarating advances or by distressing declines. This is particularly true if his reasoning is geared closely to expectations of further inflation. For then, if another bull market comes along, he will take the big rise not as a danger signal of an inevitable fall, not as a chance to cash in on his handsome profits, but rather as a vindication of the inflation hypothesis and as a reason to keep on buying common stocks no matter how high the market level nor how low the dividend return. That way lies sorrow.

### **Alternatives to Common Stocks as Inflation Hedges**

The standard policy of people all over the world who mistrust their currency has been to buy and hold gold. This has been against the law for American citizens since 1935—luckily for them. In the past 35 years the price of gold in the open market has advanced from \$35 per ounce to \$48 in early 1972—a rise of only 35%. But during all this time the holder of gold has received no income return on his capital, and instead has incurred some annual expense for storage. Obviously, he would have done much better with his money at interest in a savings bank, in spite of the rise in the general price level.

The near-complete failure of gold to protect against a loss in the purchasing power of the dollar must cast grave doubt on the ability of the ordinary investor to protect himself against inflation by putting his money in "things."\* Quite a few categories of valuable

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\* The investment philosopher Peter L. Bernstein feels that Graham was "dead wrong" about precious metals, particularly gold, which (at least in the years after Graham wrote this chapter) has shown a robust ability to outpace inflation. Financial adviser William Bernstein agrees, pointing out that a tiny allocation to a precious-metals fund (say, 2% of your total assets) is too small to hurt your overall returns when gold does poorly. But, when gold does well, its returns are often so spectacular—sometimes exceeding 100%

objects have had striking advances in market value over the years—such as diamonds, paintings by masters, first editions of books, rare stamps and coins, etc. But in many, perhaps most, of these cases there seems to be an element of the artificial or the precarious or even the unreal about the quoted prices. Somehow it is hard to think of paying \$67,500 for a U.S. silver dollar dated 1804 (but not even minted that year) as an “investment operation.”<sup>4</sup> We acknowledge we are out of our depth in this area. Very few of our readers will find the swimming safe and easy there.

The outright ownership of real estate has long been considered as a sound long-term investment, carrying with it a goodly amount of protection against inflation. Unfortunately, real-estate values are also subject to wide fluctuations; serious errors can be made in location, price paid, etc.; there are pitfalls in salesmen’s wiles. Finally, diversification is not practical for the investor of moderate means, except by various types of participations with others and with the special hazards that attach to new flotations—not too different from common-stock ownership. This too is not our field. All we should say to the investor is, “Be sure it’s yours before you go into it.”

## Conclusion

Naturally, we return to the policy recommended in our previous chapter. Just because of the uncertainties of the future the investor cannot afford to put all his funds into one basket—neither in the bond basket, despite the unprecedentedly high returns that bonds have recently offered; nor in the stock basket, despite the prospect of continuing inflation.

The more the investor depends on his portfolio and the income therefrom, the more necessary it is for him to guard against the

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in a year—that it can, all by itself, set an otherwise lackluster portfolio glittering. However, the intelligent investor avoids investing in gold directly, with its high storage and insurance costs; instead, seek out a well-diversified mutual fund specializing in the stocks of precious-metal companies and charging below 1% in annual expenses. Limit your stake to 2% of your total financial assets (or perhaps 5% if you are over the age of 65).

unexpected and the disconcerting in this part of his life. It is axiomatic that the conservative investor should seek to minimize his risks. We think strongly that the risks involved in buying, say, a telephone-company bond at yields of nearly 7½% are much less than those involved in buying the DJIA at 900 (or any stock list equivalent thereto). But the possibility of *large-scale* inflation remains, and the investor must carry some insurance against it. There is no certainty that a stock component will insure adequately against such inflation, but it should carry more protection than the bond component.

This is what we said on the subject in our 1965 edition (p. 97), and we would write the same today:

It must be evident to the reader that we have no enthusiasm for common stocks at these levels (892 for the DJIA). For reasons already given we feel that the defensive investor cannot afford to be without an appreciable proportion of common stocks in his portfolio, even if we regard them as the lesser of two evils—the greater being the risks in an all-bond holding.



## COMMENTARY ON CHAPTER 2

Americans are getting stronger. Twenty years ago, it took two people to carry ten dollars' worth of groceries. Today, a five-year-old can do it.

—Henny Youngman

**I**nflation? Who cares about *that*?

After all, the annual rise in the cost of goods and services averaged less than 2.2% between 1997 and 2002—and economists believe that even that rock-bottom rate may be overstated.<sup>1</sup> (Think, for instance, of how the prices of computers and home electronics have plummeted—and how the quality of many goods has risen, meaning that consumers are getting better value for their money.) In recent years, the true rate of inflation in the United States has probably run around 1% annually—an increase so infinitesimal that many pundits have proclaimed that “inflation is dead.”<sup>2</sup>

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<sup>1</sup> The U.S. Bureau of Labor Statistics, which calculates the Consumer Price Index that measures inflation, maintains a comprehensive and helpful website at [www.bls.gov/cpi/home.htm](http://www.bls.gov/cpi/home.htm).

<sup>2</sup> For a lively discussion of the “inflation is dead” scenario, see [www.pbs.org/newshour/bb/economy/july-dec97/inflation\\_12-16.html](http://www.pbs.org/newshour/bb/economy/july-dec97/inflation_12-16.html). In 1996, the Boskin Commission, a group of economists asked by the government to investigate whether the official rate of inflation is accurate, estimated that it has been overstated, often by nearly two percentage points per year. For the commission’s report, see [www.ssa.gov/history/reports/boskinrpt.html](http://www.ssa.gov/history/reports/boskinrpt.html). Many investment experts now feel that deflation, or falling prices, is an even greater threat than inflation; the best way to hedge against that risk is by including bonds as a permanent component of your portfolio. (See the commentary on Chapter 4.)

## THE MONEY ILLUSION

There's another reason investors overlook the importance of inflation: what psychologists call the "money illusion." If you receive a 2% raise in a year when inflation runs at 4%, you will almost certainly feel better than you will if you take a 2% pay cut during a year when inflation is zero. Yet both changes in your salary leave you in a virtually identical position—2% worse off after inflation. So long as the *nominal* (or absolute) change is positive, we view it as a good thing—even if the *real* (or after-inflation) result is negative. And any change in your own salary is more vivid and specific than the generalized change of prices in the economy as a whole.<sup>3</sup> Likewise, investors were delighted to earn 11% on bank certificates of deposit (CDs) in 1980 and are bitterly disappointed to be earning only around 2% in 2003—even though they were losing money after inflation back then but are keeping up with inflation now. The nominal rate we earn is printed in the bank's ads and posted in its window, where a high number makes us feel good. But inflation eats away at that high number in secret. Instead of taking out ads, inflation just takes away our wealth. That's why inflation is so easy to overlook—and why it's so important to measure your investing success not just by what you make, but by how much you keep after inflation.

More basically still, the intelligent investor must always be on guard against whatever is unexpected and underestimated. There are three good reasons to believe that inflation is not dead:

- As recently as 1973–1982, the United States went through one of the most painful bursts of inflation in our history. As measured by the Consumer Price Index, prices more than doubled over that period, rising at an annualized rate of nearly 9%. In 1979 alone, inflation raged at 13.3%, paralyzing the economy in what became known as "stagflation"—and leading many commentators to question whether America could compete in the global market-

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<sup>3</sup> For more insights into this behavioral pitfall, see Eldar Shafir, Peter Diamond, and Amos Tversky, "Money Illusion," in Daniel Kahneman and Amos Tversky, eds., *Choices, Values, and Frames* (Cambridge University Press, 2000), pp. 335–355.

place.<sup>4</sup> Goods and services priced at \$100 in the beginning of 1973 cost \$230 by the end of 1982, shriveling the value of a dollar to less than 45 cents. No one who lived through it would scoff at such destruction of wealth; no one who is prudent can fail to protect against the risk that it might recur.

- Since 1960, 69% of the world's market-oriented countries have suffered at least one year in which inflation ran at an annualized rate of 25% or more. On average, those inflationary periods destroyed 53% of an investor's purchasing power.<sup>5</sup> We would be crazy not to hope that America is somehow exempt from such a disaster. But we would be even crazier to conclude that it can never happen here.<sup>6</sup>
- Rising prices allow Uncle Sam to pay off his debts with dollars that have been cheapened by inflation. Completely eradicating inflation runs against the economic self-interest of any government that regularly borrows money.<sup>7</sup>

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<sup>4</sup> That year, President Jimmy Carter gave his famous "malaise" speech, in which he warned of "a crisis in confidence" that "strikes at the very heart and soul and spirit of our national will" and "threatens to destroy the social and the political fabric of America."

<sup>5</sup> See Stanley Fischer, Ratna Sahay, and Carlos A. Vegh, "Modern Hyper- and High Inflation," National Bureau of Economic Research, Working Paper 8930, at [www.nber.org/papers/w8930](http://www.nber.org/papers/w8930).

<sup>6</sup> In fact, the United States has had two periods of hyperinflation. During the American Revolution, prices roughly tripled every year from 1777 through 1779, with a pound of butter costing \$12 and a barrel of flour fetching nearly \$1,600 in Revolutionary Massachusetts. During the Civil War, inflation raged at annual rates of 29% (in the North) and nearly 200% (in the Confederacy). As recently as 1946, inflation hit 18.1% in the United States.

<sup>7</sup> I am indebted to Laurence Siegel of the Ford Foundation for this cynical, but accurate, insight. Conversely, in a time of deflation (or steadily falling prices) it's more advantageous to be a lender than a borrower—which is why most investors should keep at least a small portion of their assets in bonds, as a form of insurance against deflating prices.



## HALF A HEDGE

What, then, can the intelligent investor do to guard against inflation? The standard answer is “buy stocks”—but, as common answers so often are, it is not entirely true.

Figure 2-1 shows, for each year from 1926 through 2002, the relationship between inflation and stock prices.

As you can see, in years when the prices of consumer goods and services fell, as on the left side of the graph, stock returns were terrible—with the market losing up to 43% of its value.<sup>8</sup> When inflation shot above 6%, as in the years on the right end of the graph, stocks also stank. The stock market lost money in eight of the 14 years in which inflation exceeded 6%; the average return for those 14 years was a measly 2.6%.

While mild inflation allows companies to pass the increased costs of their own raw materials on to customers, high inflation wreaks havoc—forcing customers to slash their purchases and depressing activity throughout the economy.

The historical evidence is clear: Since the advent of accurate stock-market data in 1926, there have been 64 five-year periods (i.e., 1926–1930, 1927–1931, 1928–1932, and so on through 1998–2002). In 50 of those 64 five-year periods (or 78% of the time), stocks outpaced inflation.<sup>9</sup> That’s impressive, but imperfect; it means that stocks failed to keep up with inflation about one-fifth of the time.

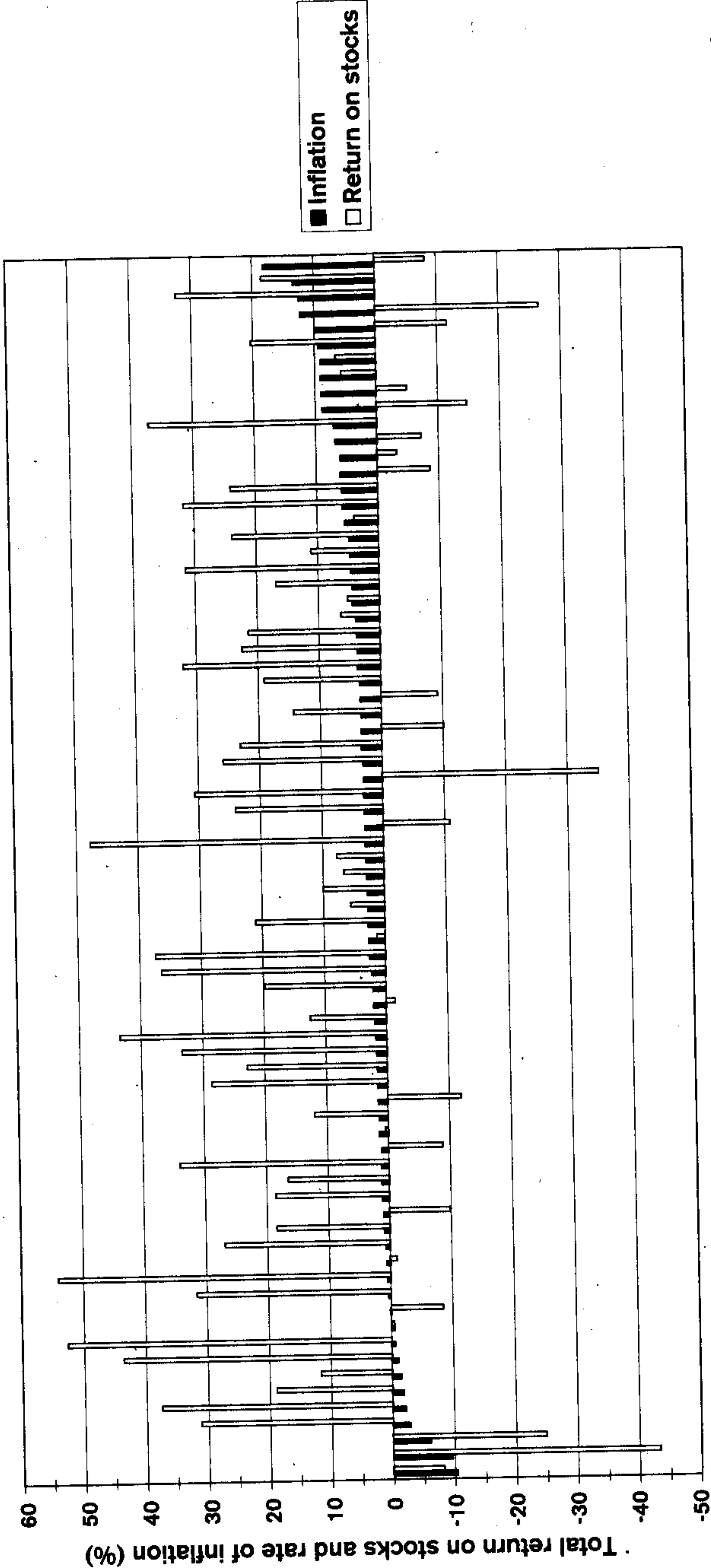
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<sup>8</sup> When inflation is negative, it is technically termed “deflation.” Regularly falling prices may at first sound appealing, until you think of the Japanese example. Prices have been deflating in Japan since 1989, with real estate and the stock market dropping in value year after year—a relentless water torture for the world’s second-largest economy.

<sup>9</sup> Ibbotson Associates, *Stocks, Bonds, Bills, and Inflation, 2003 Handbook* (Ibbotson Associates, Chicago, 2003), Table 2-8. The same pattern is evident outside the United States: In Belgium, Italy, and Germany, where inflation was especially high in the twentieth century, “inflation appears to have had a negative impact on both stock and bond markets,” note Elroy Dimson, Paul Marsh, and Mike Staunton in *Triumph of the Optimists: 101 Years of Global Investment Returns* (Princeton University Press, 2002), p. 53.

FIGURE 2-1

How Well Do Stocks Hedge Against Inflation?



*This graph shows inflation and stock returns for each year between 1926 and 2002—arrayed not in chronological order but from the lowest annual inflation rates to the highest. When inflation is highly negative (see far left), stocks do very poorly. When inflation is moderate, as it was in most years during this period, stocks generally do well. But when inflation heats up to very high levels (see far right), stocks perform erratically, often losing at least 10%.*

## TWO ACRONYMS TO THE RESCUE

Fortunately, you can bolster your defenses against inflation by branching out beyond stocks. Since Graham last wrote, two inflation-fighters have become widely available to investors:

**REITs.** Real Estate Investment Trusts, or REITs (pronounced “reets”), are companies that own and collect rent from commercial and residential properties.<sup>10</sup> Bundled into real-estate mutual funds, REITs do a decent job of combating inflation. The best choice is Vanguard REIT Index Fund; other relatively low-cost choices include Cohen & Steers Realty Shares, Columbia Real Estate Equity Fund, and Fidelity Real Estate Investment Fund.<sup>11</sup> While a REIT fund is unlikely to be a foolproof inflation-fighter, in the long run it should give you some defense against the erosion of purchasing power without hampering your overall returns.

**TIPS.** Treasury Inflation-Protected Securities, or TIPS, are U.S. government bonds, first issued in 1997, that automatically go up in value when inflation rises. Because the full faith and credit of the United States stands behind them, all Treasury bonds are safe from the risk of default (or nonpayment of interest). But TIPS also guarantee that the value of your investment won’t be eroded by inflation. In one easy package, you insure yourself against financial loss and the loss of purchasing power.<sup>12</sup>

There is one catch, however. When the value of your TIPS bond rises as inflation heats up, the Internal Revenue Service regards that increase in value as taxable income—even though it is purely a paper

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<sup>10</sup> Thorough, if sometimes outdated, information on REITs can be found at [www.nareit.com](http://www.nareit.com).

<sup>11</sup> For further information, see [www.vanguard.com](http://www.vanguard.com), [www.cohenandsteers.com](http://www.cohenandsteers.com), [www.columbiafunds.com](http://www.columbiafunds.com), and [www.fidelity.com](http://www.fidelity.com). The case for investing in a REIT fund is weaker if you own a home, since that gives you an inherent stake in real-estate ownership.

<sup>12</sup> A good introduction to TIPS can be found at [www.publicdebt.treas.gov/of/ofinfin.htm](http://www.publicdebt.treas.gov/of/ofinfin.htm). For more advanced discussions, see [www.federalreserve.gov/Pubs/feds/2002/200232/200232pap.pdf](http://www.federalreserve.gov/Pubs/feds/2002/200232/200232pap.pdf), [www.tiaa-crefinstitute.org/Publications/resdiags/73\\_09-2002.htm](http://www.tiaa-crefinstitute.org/Publications/resdiags/73_09-2002.htm), and [www.bwater.com/research\\_ibonds.htm](http://www.bwater.com/research_ibonds.htm).



gain (unless you sold the bond at its newly higher price). Why does this make sense to the IRS? The intelligent investor will remember the wise words of financial analyst Mark Schweber: "The one question never to ask a bureaucrat is 'Why?' " Because of this exasperating tax complication, TIPS are best suited for a tax-deferred retirement account like an IRA, Keogh, or 401(k), where they will not jack up your taxable income.

You can buy TIPS directly from the U.S. government at [www.publicdebt.treas.gov/of/ofinfin.htm](http://www.publicdebt.treas.gov/of/ofinfin.htm), or in a low-cost mutual fund like Vanguard Inflation-Protected Securities or Fidelity Inflation-Protected Bond Fund.<sup>13</sup> Either directly or through a fund, TIPS are the ideal substitute for the proportion of your retirement funds you would otherwise keep in cash. Do not trade them: TIPS can be volatile in the short run, so they work best as a permanent, lifelong holding. For most investors, allocating at least 10% of your retirement assets to TIPS is an intelligent way to keep a portion of your money absolutely safe—and entirely beyond the reach of the long, invisible claws of inflation.

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<sup>13</sup> For details on these funds, see [www.vanguard.com](http://www.vanguard.com) or [www.fidelity.com](http://www.fidelity.com).

## CHAPTER 3

# *A Century of Stock-Market History: The Level of Stock Prices in Early 1972*

The investor's portfolio of common stocks will represent a small cross-section of that immense and formidable institution known as the stock market. Prudence suggests that he have an adequate idea of stock-market history, in terms particularly of the major fluctuations in its price level and of the varying relationships between stock prices as a whole and their earnings and dividends. With this background he may be in a position to form some worthwhile judgment of the attractiveness or dangers of the level of the market as it presents itself at different times. By a coincidence, useful statistical data on prices, earnings, and dividends go back just 100 years, to 1871. (The material is not nearly as full or dependable in the first half-period as in the second, but it will serve.) In this chapter we shall present the figures, in highly condensed form, with two objects in view. The first is to show the general manner in which stocks have made their underlying advance through the many cycles of the past century. The second is to view the picture in terms of successive ten-year averages, not only of stock prices but of earnings and dividends as well, to bring out the varying relationship between the three important factors. With this wealth of material as a background we shall pass to a consideration of the level of stock prices at the beginning of 1972.

The long-term history of the stock market is summarized in two tables and a chart. Table 3-1 sets forth the low and high points of nineteen bear- and bull-market cycles in the past 100 years. We have used two indexes here. The first represents a combination of an early study by the Cowles Commission going back to 1870, which has been spliced on to and continued to date in the well-

**TABLE 3-1 Major Stock-Market Swings Between  
1871 and 1971**

Year	<i>Cowles-Standard 500 Composite</i>			<i>Dow-Jones Industrial Average</i>		
	High	Low	Decline	High	Low	Decline
1871		4.64				
1881	6.58					
1885		4.24	28%			
1887	5.90					
1893		4.08	31			
1897					38.85	
1899				77.6		
1900					53.5	31%
1901	8.50			78.3		
1903		6.26	26		43.2	45
1906	10.03			103		
1907		6.25	38		53	48
1909	10.30			100.5		
1914		7.35	29		53.2	47
1916-18	10.21			110.2		
1917		6.80	33		73.4	33
1919	9.51			119.6		
1921		6.45	32		63.9	47
1929	31.92			381		
1932		4.40	86		41.2	89
1937	18.68			197.4		
1938		8.50	55		99	50
1939	13.23			158		
1942		7.47	44		92.9	41
1946	19.25			212.5		
1949		13.55	30		161.2	24
1952	26.6			292		
1952-53		22.7	15		256	13
1956	49.7			521		
1957		39.0	24		420	20
1961	76.7			735		
1962		54.8	29		536	27
1966-68	108.4			995		
1970		69.3	36		631	37
early 1972	100		—	900		—



known Standard & Poor's composite index of 500 stocks. The second is the even more celebrated Dow Jones Industrial Average (the DJIA, or "the Dow"), which dates back to 1897; it contains 30 companies, of which one is American Telephone & Telegraph and the other 29 are large industrial enterprises.<sup>1</sup>

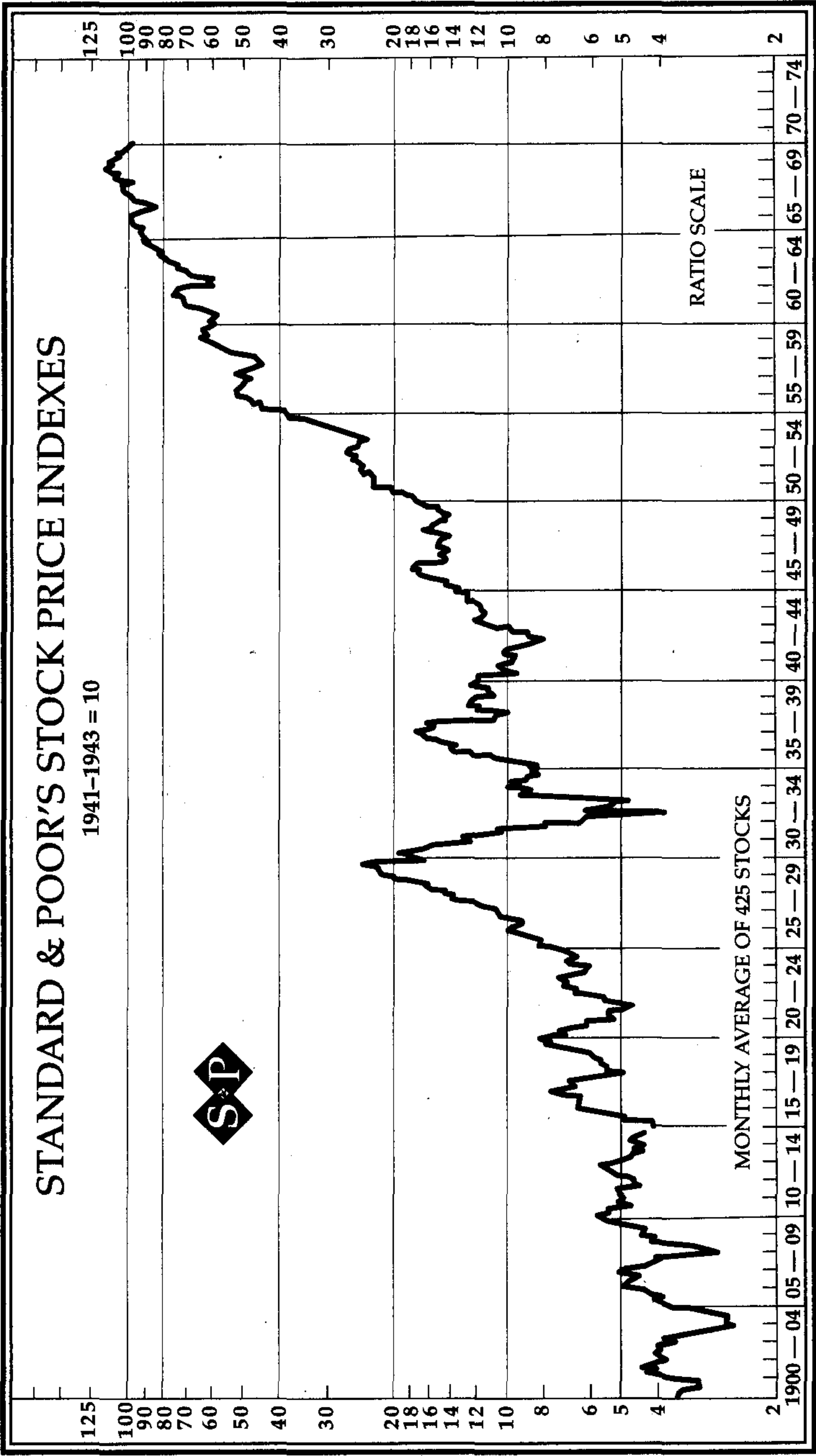
Chart I, presented by courtesy of Standard & Poor's, depicts the market fluctuations of its 425-industrial-stock index from 1900 through 1970. (A corresponding chart available for the DJIA will look very much the same.) The reader will note three quite distinct patterns, each covering about a third of the 70 years. The first runs from 1900 to 1924, and shows for the most part a series of rather similar market cycles lasting from three to five years. The annual advance in this period averaged just about 3%. We move on to the "New Era" bull market, culminating in 1929, with its terrible aftermath of collapse, followed by quite irregular fluctuations until 1949. Comparing the average level of 1949 with that of 1924, we find the annual rate of advance to be a mere 1½%; hence the close of our second period found the public with no enthusiasm at all for common stocks. By the rule of opposites the time was ripe for the beginning of the greatest bull market in our history, presented in the last third of our chart. This phenomenon may have reached its culmination in December 1968 at 118 for Standard & Poor's 425 industrials (and 108 for its 500-stock composite). As Table 3-1 shows, there were fairly important setbacks between 1949 and 1968 (especially in 1956–57 and 1961–62), but the recoveries therefrom were so rapid that they had to be denominated (in the long-accepted semantics) as recessions in a single bull market, rather than as separate market cycles. Between the low level of 162 for "the Dow" in mid-1949 and the high of 995 in early 1966, the advance had been more than sixfold in 17 years—which is at the average compounded rate of 11% per year, not counting dividends of, say, 3½% per annum. (The advance for the Standard & Poor's composite index was somewhat greater than that of the DJIA—actually from 14 to 96.)

These 14% and better returns were documented in 1963, and later, in a much publicized study.\*<sup>2</sup> It created a natural satisfaction

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\* The study, in its final form, was Lawrence Fisher and James H. Lorie, "Rates of Return on Investments in Common Stock: the Year-by-Year

CHART 1



on Wall Street with such fine achievements, and a quite illogical and dangerous conviction that equally marvelous results could be expected for common stocks in the future. Few people seem to have been bothered by the thought that the very extent of the rise might indicate that it had been overdone. The subsequent decline from the 1968 high to the 1970 low was 36% for the Standard & Poor's composite (and 37% for the DJIA), the largest since the 44% suffered in 1939–1942, which had reflected the perils and uncertainties after Pearl Harbor. In the dramatic manner so characteristic of Wall Street, the low level of May 1970 was followed by a massive and speedy recovery of both averages, and the establishment of a new all-time high for the Standard & Poor's industrials in early 1972. The annual rate of price advance between 1949 and 1970 works out at about 9% for the S & P composite (or the industrial index), using the average figures for both years. That rate of climb was, of course, much greater than for any similar period before 1950. (But in the last decade the rate of advance was much lower—5¼% for the S & P composite index and only the once familiar 3% for the DJIA.)

The record of price movements should be supplemented by corresponding figures for earnings and dividends, in order to provide an overall view of what has happened to our share economy over the ten decades. We present a conspectus of this kind in our Table 3-2 (p. 71). It is a good deal to expect from the reader that he study all these figures with care, but for some we hope they will be interesting and instructive.

Let us comment on them as follows: The full decade figures smooth out the year-to-year fluctuations and leave a general picture of persistent growth. Only two of the nine decades after the first show a decrease in earnings and average prices (in 1891–1900 and 1931–1940), and no decade after 1900 shows a decrease in average dividends. But the rates of growth in all three categories are quite variable. In general the performance since World War II has been superior to that of earlier decades, but the advance in the 1960s was less pronounced than that of the 1950s. Today's investor

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Record, 1926–65," *The Journal of Business*, vol. XLI, no. 3 (July, 1968), pp. 291–316. For a summary of the study's wide influence, see [http://library.dfaus.com/reprints/work\\_of\\_art/](http://library.dfaus.com/reprints/work_of_art/).



cannot tell from this record what percentage gain in earnings dividends and prices he may expect in the next ten years, but it does supply all the encouragement he needs for a consistent policy of common-stock investment.

However, a point should be made here that is not disclosed in our table. The year 1970 was marked by a definite deterioration in the overall earnings posture of our corporations. The rate of profit on invested capital fell to the lowest percentage since the World War years. Equally striking is the fact that a considerable number of companies reported net losses for the year; many became "financially troubled," and for the first time in three decades there were quite a few important bankruptcy proceedings. These facts as much as any others have prompted the statement made above\* that the great boom era may have come to an end in 1969–1970.

A striking feature of Table 3-2 is the change in the price/earnings ratios since World War II.† In June 1949 the S & P composite index sold at only 6.3 times the applicable earnings of the past 12 months; in March 1961 the ratio was 22.9 times. Similarly, the dividend yield on the S & P index had fallen from over 7% in 1949 to only 3.0% in 1961, a contrast heightened by the fact that interest rates on high-grade bonds had meanwhile risen from 2.60% to 4.50%. This is certainly the most remarkable turnabout in the public's attitude in all stock-market history.

To people of long experience and innate caution the passage from one extreme to another carried a strong warning of trouble ahead. They could not help thinking apprehensively of the 1926–1929 bull market and its tragic aftermath. But these fears have not been confirmed by the event. True, the closing price of the DJIA

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\* See pp. 50–52.

† The "price/earnings ratio" of a stock, or of a market average like the S & P 500-stock index, is a simple tool for taking the market's temperature. If, for instance, a company earned \$1 per share of net income over the past year, and its stock is selling at \$8.93 per share, its price/earnings ratio would be 8.93; if, however, the stock is selling at \$69.70, then the price/earnings ratio would be 69.7. In general, a price/earnings ratio (or "P/E" ratio) below 10 is considered low, between 10 and 20 is considered moderate, and greater than 20 is considered expensive. (For more on P/E ratios, see p. 168.)

TABLE 3-2 A Picture of Stock-Market Performance, 1871-1970<sup>a</sup>

Period	Average Price	Average Earnings	Average P/E Ratio	Dividend Average	Average Yield	Average Payout	Annual Growth Rate <sup>b</sup>	
							Earnings	Dividends
1871-1880	3.58	0.32	11.3	0.21	6.0%	67%	—	—
1881-1890	5.00	0.32	15.6	0.24	4.7	75	- 0.64%	-0.66%
1891-1900	4.65	0.30	15.5	0.19	4.0	64	- 1.04	-2.23
1901-1910	8.32	0.63	13.1	0.35	4.2	58	+ 6.91	+5.33
1911-1920	8.62	0.86	10.0	0.50	5.8	58	+ 3.85	+3.94
1921-1930	13.89	1.05	13.3	0.71	5.1	68	+ 2.84	+2.29
1931-1940	11.55	0.68	17.0	0.78	5.1	85	- 2.15	-0.23
1941-1950	13.90	1.46	9.5	0.87	6.3	60	+10.60	+3.25
1951-1960	39.20	3.00	13.1	1.63	4.2	54	+ 6.74	+5.90
1961-1970	82.50	4.83	17.1	2.68	3.2	55	+ 5.80 <sup>c</sup>	+5.40 <sup>c</sup>
1954-1956	38.19	2.56	15.1	1.64	4.3	65	+ 2.40 <sup>d</sup>	+7.80 <sup>d</sup>
1961-1963	66.10	3.66	18.1	2.14	3.2	58	+ 5.15 <sup>d</sup>	+4.42 <sup>d</sup>
1968-1970	93.25	5.60	16.7	3.13	3.3	56	+ 6.30 <sup>d</sup>	+5.60 <sup>d</sup>

<sup>a</sup> The following data based largely on figures appearing in N. Molodovsky's article, "Stock Values and Stock Prices," *Financial Analysts Journal*, May 1960. These, in turn, are taken from the Cowles Commission book *Common Stock Indexes* for years before 1926 and from the spliced-on Standard & Poor's 500-stock composite index for 1926 to date.

<sup>b</sup> The annual growth-rate figures are Molodovsky compilations covering successive 21-year periods ending in 1890, 1900, etc.

<sup>c</sup> Growth rate for 1968-1970 vs. 1958-1960.

<sup>d</sup> These growth-rate figures are for 1954-1956 vs. 1947-1949, 1961-1963 vs. 1954-1956, and for 1968-1970 vs. 1958-1960.

in 1970 was the same as it was 6½ years earlier, and the much heralded "Soaring Sixties" proved to be mainly a march up a series of high hills and then down again. But nothing has happened either to business or to stock prices that can compare with the bear market and depression of 1929–1932.

## **The Stock-Market Level in Early 1972**

With a century-long conspectus of stock, prices, earnings, and dividends before our eyes, let us try to draw some conclusions about the level of 900 for the DJIA and 100 for the S & P composite index in January 1972.

In each of our former editions we have discussed the level of the stock market at the time of writing, and endeavored to answer the question whether it was too high for conservative purchase. The reader may find it informing to review the conclusions we reached on these earlier occasions. This is not entirely an exercise in self-punishment. It will supply a sort of connecting tissue that links the various stages of the stock market in the past twenty years and also a taken-from-life picture of the difficulties facing anyone who tries to reach an informed and critical judgment of current market levels. Let us, first, reproduce the summary of the 1948, 1953, and 1959 analyses that we gave in the 1965 edition:

In 1948 we applied conservative standards to the Dow Jones level of 180, and found no difficulty in reaching the conclusion that "it was not too high in relation to underlying values." When we approached this problem in 1953 the average market level for that year had reached 275, a gain of over 50% in five years. We asked ourselves the same question—namely, "whether in our opinion the level of 275 for the Dow Jones Industrials was or was not too high for sound investment." In the light of the subsequent spectacular advance, it may seem strange to have to report that it was by no means easy for us to reach a definitive conclusion as to the attractiveness of the 1953 level. We did say, positively enough, that "from the standpoint of value indications—our chief investment guide—the conclusion about 1953 stock prices must be favorable." But we were concerned about the fact that in 1953, the averages had advanced for a longer period than in most bull markets of the



past, and that its absolute level was historically high. Setting these factors against our favorable value judgment, we advised a cautious or compromise policy. As it turned out, this was not a particularly brilliant counsel. A good prophet would have foreseen that the market level was due to advance an additional 100% in the next five years. Perhaps we should add in self-defense that few if any of those whose business was stock-market forecasting—as ours was not—had any better inkling than we did of what lay ahead.

At the beginning of 1959 we found the DJIA at an all-time high of 584. Our lengthy analysis made from all points of view may be summarized in the following (from page 59 of the 1959 edition): "In sum, we feel compelled to express the conclusion that the present level of stock prices is a dangerous one. It may well be perilous because prices are already far too high. But even if this is not the case the market's momentum is such as inevitably to carry it to unjustifiable heights. Frankly, we cannot imagine a market of the future in which there will never be any serious losses, and in which, every tyro will be guaranteed a large profit on his stock purchases."

The caution we expressed in 1959 was somewhat better justified by the sequel than was our corresponding attitude in 1954. Yet it was far from fully vindicated. The DJIA advanced to 685 in 1961; then fell a little below our 584 level (to 566) later in the year; advanced again to 735 in late 1961; and then declined in near panic to 536 in May 1962, showing a loss of 27% within the brief period of six months. At the same time there was a far more serious shrinkage in the most popular "growth stocks"—as evidenced by the striking fall of the indisputable leader, International Business Machines, from a high of 607 in December 1961 to a low of 300 in June 1962.

This period saw a complete debacle in a host of newly launched common stocks of small enterprises—the so-called hot issues—which had been offered to the public at ridiculously high prices and then had been further pushed up by needless speculation to levels little short of insane. Many of these lost 90% and more of the quotations in just a few months.

The collapse in the first half of 1962 was disconcerting, if not disastrous, to many self-acknowledged speculators and perhaps

to many more imprudent people who called themselves “investors.” But the turnabout that came later that year was equally unsuspected by the financial community. The stock-market averages resumed their upward course, producing the following sequence:

	<i>DJIA</i>	<i>Standard &amp; Poor's 500-Stock Composite</i>
December 1961	735	72.64
June 1962	536	52.32
November 1964	892	86.28

The recovery and new ascent of common-stock prices was indeed remarkable and created a corresponding revision of Wall Street sentiment. At the low level of June 1962 predictions had appeared predominantly bearish, and after the partial recovery to the end of that year they were mixed, leaning to the skeptical side. But at the outset of 1964 the natural optimism of brokerage firms was again manifest; nearly all the forecasts were on the bullish side, and they so continued through the 1964 advance.

We then approached the task of appraising the November 1964 levels of the stock market (892 for the DJIA). After discussing it learnedly from numerous angles we reached three main conclusions. The first was that “old standards (of valuation) appear inapplicable; new standards have not yet been tested by time.” The second was that the investor “must base his policy on the existence of major uncertainties. The possibilities compass the extremes, on the one hand, of a protracted and further advance in the market’s level—say by 50%, or to 1350 for the DJIA; or, on the other hand, of a largely unheralded collapse of the same magnitude, bringing the average in the neighborhood of, say, 450” (p. 63). The third was expressed in much more definite terms. We said: “Speaking bluntly, if the 1964 price level is not too high how could we say that *any* price level is too high?” And the chapter closed as follows:

## WHAT COURSE TO FOLLOW

Investors should not conclude that the 1964 market level is dangerous merely because they read it in this book. They must weigh our reasoning against the contrary reasoning they will hear from most competent and experienced people on Wall Street. In the end each one must make his own decision and accept responsibility therefor. We suggest, however, that if the investor is in doubt as to which course to pursue he should choose the path of caution. The principles of investment, as set forth herein, would call for the following policy under 1964 conditions, in order of urgency:

1. No borrowing to buy or hold securities.
2. No increase in the proportion of funds held in common stocks.
3. A reduction in common-stock holdings where needed to bring it down to a maximum of 50 per cent of the total portfolio. The capital-gains tax must be paid with as good grace as possible, and the proceeds invested in first-quality bonds or held as a savings deposit.

Investors who for some time have been following a bona fide dollar-cost averaging plan can in logic elect either to continue their periodic purchases unchanged or to suspend them until they feel the market level is no longer dangerous. We should advise rather strongly against the initiation of a new dollar-averaging plan at the late 1964 levels, since many investors would not have the stamina to pursue such a scheme if the results soon after initiation should appear highly unfavorable.

This time we can say that our caution was vindicated. The DJIA advanced about 11% further, to 995, but then fell irregularly to a low of 632 in 1970, and finished that year at 839. The same kind of debacle took place in the price of "hot issues"—i.e., with declines running as much as 90%—as had happened in the 1961–62 setback. And, as pointed out in the Introduction, the whole financial picture appeared to have changed in the direction of less enthusiasm and greater doubts. A single fact may summarize the story: The DJIA closed 1970 at a level lower than six years before—the first time such a thing had happened since 1944.



Such were our efforts to evaluate former stock-market levels. Is there anything we and our readers can learn from them? We considered the market level favorable for investment in 1948 and 1953 (but too cautiously in the latter year), "dangerous" in 1959 (at 584 for DJIA), and "too high" (at 892) in 1964. All of these judgments could be defended even today by adroit arguments. But it is doubtful if they have been as useful as our more pedestrian counsels—in favor of a consistent and controlled common-stock policy on the one hand, and discouraging endeavors to "beat the market" or to "pick the winners" on the other.

Nonetheless we think our readers may derive some benefit from a renewed consideration of the level of the stock market—this time as of late 1971—even if what we have to say will prove more interesting than practically useful, or more indicative than conclusive. There is a fine passage near the beginning of Aristotle's *Ethics* that goes: "It is the mark of an educated mind to expect that amount of exactness which the nature of the particular subject admits. It is equally unreasonable to accept merely probable conclusions from a mathematician and to demand strict demonstration from an orator." The work of a financial analyst falls somewhere in the middle between that of a mathematician and of an orator.

At various times in 1971 the Dow Jones Industrial Average stood at the 892 level of November 1964 that we considered in our previous edition. But in the present statistical study we have decided to use the price level and the related data for the Standard & Poor's composite index (or S & P 500), because it is more comprehensive and representative of the general market than the 30-stock DJIA. We shall concentrate on a comparison of this material near the four dates of our former editions—namely the year-ends of 1948, 1953, 1958 and 1963—plus 1968; for the current price level we shall take the convenient figure of 100, which was registered at various times in 1971 and in early 1972. The salient data are set forth in Table 3-3. For our earnings figures we present both the last year's showing and the average of three calendar years; for 1971 dividends we use the last twelve months' figures; and for 1971 bond interest and wholesale prices those of August 1971.

The 3-year price/earnings ratio for the market was lower in October 1971 than at year-end 1963 and 1968. It was about the same as in 1958, but much higher than in the early years of the long bull

TABLE 3-3 Data Relating to Standard & Poor's Composite Index in Various Years

Year <sup>a</sup>	1948	1953	1958	1963	1968	1971
Closing price	15.20	24.81	55.21	75.02	103.9	100 <sup>d</sup>
Earned in current year	2.24	2.51	2.89	4.02	5.76	5.23
Average earnings of last 3 years	1.65	2.44	2.22	3.63	5.37	5.53
Dividend in current year	.93	1.48	1.75	2.28	2.99	3.10
High-grade bond interest <sup>a</sup>	2.77%	3.08%	4.12%	4.36%	6.51%	7.57%
Wholesale-price index	87.9	92.7	100.4	105.0	108.7	114.3
Ratios:						
Price/last year's earnings	6.3 ×	9.9 ×	18.4 ×	18.6 ×	18.0 ×	19.2 ×
Price/3-years' earnings	9.2 ×	10.2 ×	17.6 ×	20.7 ×	19.5 ×	18.1 ×
3-Years' "earnings yield" <sup>c</sup>	10.9 %	9.8 %	5.8 %	4.8 %	5.15%	5.53%
Dividend yield	5.6 %	5.5 %	3.3 %	3.04%	2.87%	3.11%
Stock-earnings yield/bond yield	3.96×	3.20×	1.41×	1.10×	.80×	.72×
Dividend yield/bond yield	2.1 ×	1.8 ×	.80×	.70×	.44×	.41×
Earnings/book value <sup>e</sup>	11.2 %	11.8 %	12.8 %	10.5 %	11.5 %	11.5 %

<sup>a</sup> Yield on S & P AAA bonds.

<sup>b</sup> Calendar years in 1948–1968, plus year ended June 1971.

<sup>c</sup> "Earnings yield" means the earnings divided by the price, in %.

<sup>d</sup> Price in Oct. 1971, equivalent to 900 for the DJIA.

<sup>e</sup> Three-year average figures.

market. This important indicator, taken by itself, could not be construed to indicate that the market was especially high in January 1972. But when the interest yield on high-grade bonds is brought into the picture, the implications become much less favorable. The reader will note from our table that the ratio of stock returns (earnings/price) to bond returns has grown worse during the entire period, so that the January 1972 figure was less favorable to stocks, by this criterion, than in any of the previous years examined. When dividend yields are compared with bond yields we find that the relationship was completely reversed between 1948 and 1972. In the early year stocks yielded twice as much as bonds; now bonds yield twice as much, and more, than stocks.

Our final judgment is that the adverse change in the bond-yield/stock-yield ratio fully offsets the better price/earnings ratio for late 1971, based on the 3-year earnings figures. Hence our view of the early 1972 market level would tend to be the same as it was some 7 years ago—i.e., that it is an unattractive one from the standpoint of conservative investment. (This would apply to most of the 1971 price range of the DJIA: between, say, 800 and 950.)

In terms of historical market swings the 1971 picture would still appear to be one of irregular recovery from the bad setback suffered in 1969–1970. In the past such recoveries have ushered in a new stage of the recurrent and persistent bull market that began in 1949. (This was the expectation of Wall Street generally during 1971.) After the terrible experience suffered by the public buyers of low-grade common-stock offerings in the 1968–1970 cycle, it is too early (in 1971) for another twirl of the new-issue merry-go-round. Hence that dependable sign of imminent danger in the market is lacking now, as it was at the 892 level of the DJIA in November 1964, considered in our previous edition. Technically, then, the outlook would appear to favor another substantial rise far beyond the 900 DJIA level before the next serious setback or collapse. But we cannot quite leave the matter there, as perhaps we should. To us, the early-1971-market's disregard of the harrowing experiences of less than a year before is a disquieting sign. Can such heedlessness go unpunished? We think the investor must be prepared for difficult times ahead—perhaps in the form of a fairly quick replay of the the 1969–1970 decline, or perhaps in the form of another bull-market fling, to be followed by a more catastrophic collapse.<sup>3</sup>



**What Course to Follow**

Turn back to what we said in the last edition, reproduced on p. 75. This is our view at the same price level—say 900—for the DJIA in early 1972 as it was in late 1964.

# COMMENTARY ON CHAPTER 3

You've got to be careful if you don't know where you're going,  
'cause you might not get there.

—Yogi Berra

## BULL-MARKET BALONEY

In this chapter, Graham shows how prophetic he can be. He looks two years ahead, foreseeing the “catastrophic” bear market of 1973–1974, in which U.S. stocks lost 37% of their value.<sup>1</sup> He also looks more than two decades into the future, eviscerating the logic of market gurus and best-selling books that were not even on the horizon in his lifetime.

The heart of Graham's argument is that the intelligent investor must never forecast the future exclusively by extrapolating the past. Unfortunately, that's exactly the mistake that one pundit after another made in the 1990s. A stream of bullish books followed Wharton finance professor Jeremy Siegel's *Stocks for the Long Run* (1994)—culminating, in a wild crescendo, with James Glassman and Kevin Hassett's *Dow 36,000*, David Elias' *Dow 40,000*, and Charles Kadlec's *Dow 100,000* (all published in 1999). Forecasters argued that stocks had returned an annual average of 7% after inflation ever since 1802. Therefore, they concluded, that's what investors should expect in the future.

Some bulls went further. Since stocks had “always” beaten bonds over any period of at least 30 years, stocks must be less risky than bonds or even cash in the bank. And if you can eliminate all the risk of owning stocks simply by hanging on to them long enough, then why

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<sup>1</sup> If dividends are not included, stocks fell 47.8% in those two years.

quibble over how much you pay for them in the first place? (To find out why, see the sidebar on p. 82.)

In 1999 and early 2000, bull-market baloney was everywhere:

- On December 7, 1999, Kevin Landis, portfolio manager of the Firsthand mutual funds, appeared on CNN's *Moneyline* telecast. Asked if wireless telecommunication stocks were overvalued—with many trading at infinite multiples of their earnings—Landis had a ready answer. “It’s not a mania,” he shot back. “Look at the outright growth, the absolute value of the growth. It’s big.”
- On January 18, 2000, Robert Froelich, chief investment strategist at the Kemper Funds, declared in the *Wall Street Journal*: “It’s a new world order. We see people discard all the right companies with all the right people with the right vision because their stock price is too high—that’s the worst mistake an investor can make.”
- In the April 10, 2000, issue of *BusinessWeek*, Jeffrey M. Applegate, then the chief investment strategist at Lehman Brothers, asked rhetorically: “Is the stock market riskier today than two years ago simply because prices are higher? The answer is *no*.”

But the answer is *yes*. It always has been. It always will be.

And when Graham asked, “Can such heedlessness go unpunished?” he knew that the eternal answer to that question is *no*. Like an enraged Greek god, the stock market crushed everyone who had come to believe that the high returns of the late 1990s were some kind of divine right. Just look at how those forecasts by Landis, Froelich, and Applegate held up:

- From 2000 through 2002, the most stable of Landis’s pet wireless stocks, Nokia, lost “only” 67%—while the worst, Winstar Communications, lost 99.9%.
- Froelich’s favorite stocks—Cisco Systems and Motorola—fell more than 70% by late 2002. Investors lost over \$400 billion on Cisco alone—more than the annual economic output of Hong Kong, Israel, Kuwait, and Singapore combined.
- In April 2000, when Applegate asked his rhetorical question, the Dow Jones Industrials stood at 11,187; the NASDAQ Composite Index was at 4446. By the end of 2002, the Dow was hobbling around the 8,300 level, while NASDAQ had withered to roughly 1300—eradicating all its gains over the previous six years.



## SURVIVAL OF THE FATTEST

There was a fatal flaw in the argument that stocks have “always” beaten bonds in the long run: Reliable figures before 1871 do not exist. The indexes used to represent the U.S. stock market’s earliest returns contain as few as seven (yes, 7!) stocks.<sup>1</sup> By 1800, however, there were some 300 companies in America (many in the Jeffersonian equivalents of the Internet: wooden turnpikes and canals). Most went bankrupt, and their investors lost their knickers.

But the stock indexes ignore all the companies that went bust in those early years, a problem technically known as “survivorship bias.” Thus these indexes wildly overstate the results earned by real-life investors—who lacked the 20/20 hindsight necessary to know exactly which seven stocks to buy. A lonely handful of companies, including Bank of New York and J. P. Morgan Chase, have prospered continuously since the 1790s. But for every such miraculous survivor, there were thousands of financial disasters like the Dismal Swamp Canal Co., the Pennsylvania Cultivation of Vines Co., and the Snickers’s Gap Turnpike Co.—all omitted from the “historical” stock indexes.

Jeremy Siegel’s data show that, after inflation, from 1802 through 1870 stocks gained 7.0% per year, bonds 4.8%, and cash 5.1%. But Elroy Dimson and his colleagues at London Business School estimate that the pre-1871 stock returns are overstated by at least two percentage points per year.<sup>2</sup> In the real world, then, stocks did no better than cash and bonds—and perhaps a bit worse. Anyone who claims that the long-term record “proves” that stocks are guaranteed to outperform bonds or cash is an ignoramus.

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<sup>1</sup> By the 1840s, these indexes had widened to include a maximum of seven financial stocks and 27 railroad stocks—still an absurdly unrepresentative sample of the rambunctious young American stock market.

<sup>2</sup> See Jason Zweig, “New Cause for Caution on Stocks,” *Time*, May 6, 2002, p. 71. As Graham hints on p. 65, even the stock indexes between 1871 and the 1920s suffer from survivorship bias, thanks to the hundreds of automobile, aviation, and radio companies that went bust without a trace. These returns, too, are probably overstated by one to two percentage points.

## THE HIGHER THEY GO, THE HARDER THEY FALL

As the enduring antidote to this kind of bull-market baloney, Graham urges the intelligent investor to ask some simple, skeptical questions. Why should the future returns of stocks always be the same as their past returns? When every investor comes to believe that stocks are guaranteed to make money in the long run, won't the market end up being wildly overpriced? And once that happens, how can future returns possibly be high?

Graham's answers, as always, are rooted in logic and common sense. The value of any investment is, and always must be, a function of the price you pay for it. By the late 1990s, inflation was withering away, corporate profits appeared to be booming, and most of the world was at peace. But that did not mean—nor could it ever mean—that stocks were worth buying *at any price*. Since the profits that companies can earn are finite, the price that investors should be willing to pay for stocks must also be finite.

Think of it this way: Michael Jordan may well have been the greatest basketball player of all time, and he pulled fans into Chicago Stadium like a giant electromagnet. The Chicago Bulls got a bargain by paying Jordan up to \$34 million a year to bounce a big leather ball around a wooden floor. But that does not mean the Bulls would have been justified paying him \$340 million, or \$3.4 billion, or \$34 billion, per season.

## THE LIMITS OF OPTIMISM

Focusing on the market's recent returns when they have been rosy, warns Graham, will lead to "a quite illogical and dangerous conclusion that equally marvelous results could be expected for common stocks in the future." From 1995 through 1999, as the market rose by at least 20% each year—a surge unprecedented in American history—stock buyers became ever more optimistic:

- In mid-1998, investors surveyed by the Gallup Organization for the PaineWebber brokerage firm expected their portfolios to earn an average of roughly 13% over the year to come. By early 2000, their average expected return had jumped to more than 18%.

- “Sophisticated professionals” were just as bullish, jacking up their own assumptions of future returns. In 2001, for instance, SBC Communications raised the projected return on its pension plan from 8.5% to 9.5%. By 2002, the average assumed rate of return on the pension plans of companies in the Standard & Poor's 500-stock index had swollen to a record-high 9.2%.

A quick follow-up shows the awful aftermath of excess enthusiasm:

- Gallup found in 2001 and 2002 that the average expectation of one-year returns on stocks had slumped to 7%—even though investors could now buy at prices nearly 50% lower than in 2000.<sup>2</sup>
- Those gung-ho assumptions about the returns on their pension plans will cost the companies in the S & P 500 a bare minimum of \$32 billion between 2002 and 2004, according to recent Wall Street estimates.

Even though investors all know they're supposed to buy low and sell high, in practice they often end up getting it backwards. Graham's warning in this chapter is simple: “By the rule of opposites,” the more enthusiastic investors become about the stock market in the long run, the more certain they are to be proved wrong in the short run. On March 24, 2000, the total value of the U.S. stock market peaked at \$14.75 trillion. By October 9, 2002, just 30 months later, the total U.S. stock market was worth \$7.34 trillion, or 50.2% less—a loss of \$7.41 trillion. Meanwhile, many market pundits turned sourly bearish, predicting flat or even negative market returns for years—even decades—to come.

At this point, Graham would ask one simple question: Considering how calamitously wrong the “experts” were the last time they agreed on something, why on earth should the intelligent investor believe them now?

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<sup>2</sup> Those cheaper stock prices do not mean, of course, that investors' expectation of a 7% stock return will be realized.



## WHAT'S NEXT?

Instead, let's tune out the noise and think about future returns as Graham might. The stock market's performance depends on three factors:

- real growth (the rise of companies' earnings and dividends)
- inflationary growth (the general rise of prices throughout the economy)
- speculative growth—or decline (any increase or decrease in the investing public's appetite for stocks)

In the long run, the yearly growth in corporate earnings per share has averaged 1.5% to 2% (not counting inflation).<sup>3</sup> As of early 2003, inflation was running around 2.4% annually; the dividend yield on stocks was 1.9%. So,

$$\begin{array}{r}
 1.5\% \text{ to } 2\% \\
 + 2.4\% \\
 + 1.9\% \\
 \hline
 = 5.8\% \text{ to } 6.3\%
 \end{array}$$

In the long run, that means you can reasonably expect stocks to average roughly a 6% return (or 4% after inflation). If the investing public gets greedy again and sends stocks back into orbit, then that speculative fever will temporarily drive returns higher. If, instead, investors are full of fear, as they were in the 1930s and 1970s, the returns on stocks will go temporarily lower. (That's where we are in 2003.)

Robert Shiller, a finance professor at Yale University, says Graham inspired his valuation approach: Shiller compares the current price of the Standard & Poor's 500-stock index against average corporate profits over the past 10 years (after inflation). By scanning the historical record, Shiller has shown that when his ratio goes well above 20, the market usually delivers poor returns afterward; when it drops well

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<sup>3</sup> See Jeremy Siegel, *Stocks for the Long Run* (McGraw-Hill, 2002), p. 94, and Robert Arnott and William Bernstein, "The Two Percent Dilution," working paper, July, 2002.

below 10, stocks typically produce handsome gains down the road. In early 2003, by Shiller's math, stocks were priced at about 22.8 times the average inflation-adjusted earnings of the past decade—still in the danger zone, but way down from their demented level of 44.2 times earnings in December 1999.

How has the market done in the past when it was priced around today's levels? Figure 3-1 shows the previous periods when stocks were at similar highs, and how they fared over the 10-year stretches that followed:

**FIGURE 3-1**

Year	Price/earnings ratio	Total return over next 10 years
1898	21.4	9.2
1900	20.7	7.1
1901	21.7	5.9
1905	19.6	5.0
1929	22.0	−0.1
1936	21.1	4.4
1955	18.9	11.1
1959	18.6	7.8
1961	22.0	7.1
1962	18.6	9.9
1963	21.0	6.0
1964	22.8	1.2
1965	23.7	3.3
1966	19.7	6.6
1967	21.8	3.6
1968	22.3	3.2
1972	18.6	6.7
1992	20.4	9.3
Averages	20.8	6.0

Sources: [http://aida.econ.yale.edu/~shiller/data/ie\\_data.htm](http://aida.econ.yale.edu/~shiller/data/ie_data.htm);  
Jack Wilson and Charles Jones, "An Analysis of the S & P 500 Index and Cowles' Extensions: Price Index and Stock Returns, 1870–1999," *The Journal of Business*, vol. 75, no. 3, July, 2002, pp. 527–529; Ibbotson Associates.

Notes: Price/earnings ratio is Shiller calculation (10-year average real earnings of S & P 500-stock index divided by December 31 index value). Total return is nominal annual average.

So, from valuation levels similar to those of early 2003, the stock market has sometimes done very well in the ensuing 10 years, sometimes poorly, and muddled along the rest of the time. I think Graham, ever the conservative, would split the difference between the lowest and highest past returns and project that over the next decade stocks will earn roughly 6% annually, or 4% after inflation. (Interestingly, that projection matches the estimate we got earlier when we added together real growth, inflationary growth, and speculative growth.) Compared to the 1990s, 6% is chicken feed. But it's a whisker better than the gains that bonds are likely to produce—and reason enough for most investors to hang on to stocks as part of a diversified portfolio.

But there is a second lesson in Graham's approach. The only thing you can be confident of while forecasting future stock returns is that you will probably turn out to be wrong. The only indisputable truth that the past teaches us is that the future will always surprise us—always! And the corollary to that law of financial history is that the markets will most brutally surprise the very people who are most certain that their views about the future are right. Staying humble about your forecasting powers, as Graham did, will keep you from risking too much on a view of the future that may well turn out to be wrong.

So, by all means, you should lower your expectations—but take care not to depress your spirit. For the intelligent investor, hope always springs eternal, because *it should*. In the financial markets, the worse the future looks, the better it usually turns out to be. A cynic once told G. K. Chesterton, the British novelist and essayist, “Blessed is he who expecteth nothing, for he shall not be disappointed.” Chesterton's rejoinder? “Blessed is he who expecteth nothing, for he shall enjoy everything.”