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The most celebrated of investors says stocks can't possibly meet the public's expectations. As for the Internet? He notes how few people got rich from two other transforming industries, auto and aviation.

Mr. Buffett on the Stock Market

Warren Buffett, chairman of Berkshire Hathaway, almost never talks publicly about the general level of stock prices—neither in his famed annual report nor at Berkshire's thronged annual meetings nor in the rare speeches he gives. But in the past few months, on four occasions, Buffett did step up to that subject, laying out his opinions, in ways both analytical and creative, about the long-term future for stocks. FORTUNE*'s Carol Loomis heard the last of those talks, given in September to a group of Buffett's friends (of whom she is one), and also watched a videotape of the first speech, given in July at Allen & Co.'s Sun Valley, Idaho, bash for business leaders. From those extemporaneous talks (the first made with the Dow Jones industrial average at 11,194), Loomis distilled the following account of what Buffett said. Buffett reviewed it and weighed in with some clarifications.*

Investors in stocks these days are expecting far too much, and I'm going to explain why. That will inevitably set me to talking about the general stock market, a subject I'm usually unwilling to discuss. But I want to make one thing clear going in: Though I will be talking about the level of the market, I will *not* be predicting its next moves. At Berkshire we focus almost exclusively on the valuations of individual companies, looking only to a very limited extent at the valuation of the overall market. Even then, valuing the market has nothing to do with where it's going to go next week or next month or next year, a line of thought we never get into. The fact is that markets behave in ways, sometimes for a very long stretch, that are not linked to value. Sooner or later, though, value counts. So what I am going to be saying—assuming it's correct—*will* have implications for the long-term results to be realized by American stockholders.

Let's start by defining "investing." The definition is simple but often forgotten: Investing is laying out money now to get more money back in the future—more money in *real* terms, after taking inflation into account.

Now, to get some historical perspective, let's look back at the 34 years before this one—and here we are going to see an almost Biblical kind of symmetry, in the sense of lean years and fat years—to observe what happened in the stock market. Take, to begin with, the first 17 years of the period, from the end of 1964 through 1981. Here's what took place in that interval:

- DOW JONES INDUSTRIAL AVERAGE
  Dec. 31, 1964: **874.12**
  Dec. 31, 1981: **875.00**

Now I'm known as a long-term investor and a patient guy, but that is not my idea of a big move.

And here's a major and very opposite fact: During that same 17 years, the GDP of the U.S.—that is, the business being done in this country—almost quintupled, rising by 370%. Or, if we look at another measure, the sales of the FORTUNE 500 (a changing mix of companies, of course) more than sextupled. And yet the Dow went exactly nowhere.

To understand why that happened, we need first to look at one of the two important variables that affect investment results: interest rates. These act on financial valuations the way gravity acts on matter: The higher the rate, the greater the downward pull. That's because the rates of return that investors need from any kind of investment are directly tied to the risk-free rate that they can earn from government securities. So if the government rate rises, the prices of all other investments must adjust downward, to a level that brings their expected rates of return into line. Conversely, if government interest rates fall, the move pushes the prices of all other investments upward. The basic proposition is this: What an investor should pay today for a dollar to be received tomorrow can *only* be determined by first looking at the risk-free interest rate.

Consequently, every time the risk-free rate moves by one basis point—by 0.01%—the value of every investment in the country changes. People can see this easily in the case of bonds, whose value is normally affected only by interest rates. In the case of equities or real estate or farms or whatever, other very important variables are almost always at work, and that means the effect of interest rate changes is usually obscured. Nonetheless, the effect—like the invisible pull of gravity—is constantly there.

In the 1964–81 period, there was a tremendous increase in the rates on long-term government bonds, which moved from

PHOTOGRAPH BY GEORGE LANGE

BUFFETT says investors have an unshakable habit of looking in the rear-view mirror.

just over 4% at year-end 1964 to more than 15% by late 1981. That rise in rates had a huge depressing effect on the value of all investments, but the one we noticed, of course, was the price of equities. So *there*—in that tripling of the gravitational pull of interest rates—lies the major explanation of why tremendous growth in the economy was accompanied by a stock market going nowhere.

Then, in the early 1980s, the situation reversed itself. You will remember Paul Volcker coming in as chairman of the Fed and remember also how unpopular he was. But the heroic things he did—his taking a two-by-four to the economy and breaking the back of inflation—caused the interest rate trend to reverse, with some rather spectacular results. Let's say you put $1 million into the 14% 30-year U.S. bond issued Nov. 16, 1981, and reinvested the coupons. That is, every time you got an interest payment, you used it to buy more of that same bond. At the end of 1998, with long-term governments by then selling at 5%, you would have had $8,181,219 and would have earned an annual return of more than 13%.

That 13% annual return is better than stocks have done in a great many 17-year periods in history—in most 17-year periods, in fact. It was a helluva result, and from none other than a stodgy bond.

The power of interest rates had the effect of pushing up equities as well, though other things that we will get to pushed additionally. And so here's what equities did in that same 17 years: If you'd invested $1 million in the Dow on Nov. 16, 1981, and reinvested all dividends, you'd have had $19,720,112 on Dec. 31, 1998. And your annual return would have been 19%.

The increase in equity values since 1981 beats anything you can find in history. This increase even surpasses what you would have realized if you'd bought stocks in 1932, at their Depression bottom—on its lowest day, July 8, 1932, the Dow closed at 41.22—and held them for 17 years.

The second thing bearing on stock prices during this 17 years was after-tax corporate profits, which this chart [above] displays as a percentage of GDP. In effect, what this chart tells you is what portion of the GDP ended up every year with the shareholders of American business.

The chart, as you will see, starts in 1929. I'm quite fond of 1929, since that's when it all began for me. My dad was a stock salesman at the time, and after the Crash came, in the fall, he was afraid to call anyone—all those people who'd been burned. So he just stayed home in the afternoons. And there wasn't television then. Soooo ... I was conceived on or about Nov. 30, 1929 (and born nine months later, on Aug. 30, 1930), and I've forever had a kind of warm feeling about the Crash.

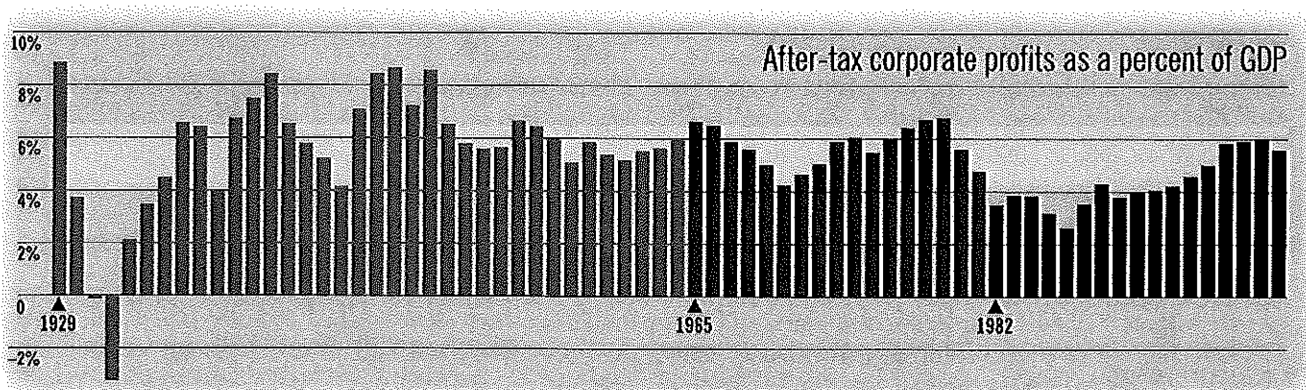
As you can see, corporate profits as a percentage of GDP peaked in 1929, and then they tanked. The left-hand side of the chart, in fact, is filled with aberrations: not only the Depression but also a wartime profits boom—sedated by the excess-profits tax—and another boom after the war. But from 1951 on, the percentage settled down pretty much to a 4% to 6.5% range.

By 1981, though, the trend was headed toward the bottom of that band, and in 1982 profits tumbled to 3.5%. So at that point investors were looking at two strong negatives: Profits were sub-par and interest rates were sky-high.

And as is so typical, investors projected out into the future what they were seeing. That's their unshakable habit: looking into the rear-view mirror instead of through the windshield. What they were observing, looking backward, made them very discouraged about the country. They were projecting high interest rates, they were projecting low profits, and they were therefore valuing the Dow at a level that was the same as 17 years earlier, even though GDP had nearly quintupled.

Now, what happened in the 17 years beginning with 1982? One thing that didn't happen was comparable growth in GDP: In this second 17-year period, GDP less than tripled. But interest rates began their descent, and after the Volcker effect wore off, profits began to climb—not steadily, but nonetheless with real power. You can see the profit trend in the chart, which shows that by the late 1990s, after-tax profits as a percent of GDP were running close to 6%, which is on the upper part of the "normalcy" band. And at the end of 1998, long-term government interest rates had made their way down to that 5%.

These dramatic changes in the two fundamentals that matter most to investors explain much, though not all, of the more than tenfold rise in equity prices—the Dow went from 875 to 9,181— during this 17-year period. What was at work also, of course, was market psychology. Once a bull market gets under way, and once you reach the point where everybody has made money no matter what system he or she followed, a crowd is at-



tracted into the game that is responding not to interest rates and profits but simply to the fact that it seems a mistake to be out of stocks. In effect, these people superimpose an I-can't-miss-the-party factor on top of the fundamental factors that drive the market. Like Pavlov's dog, these "investors" learn that when the bell rings—in this case, the one that opens the New York Stock Exchange at 9:30 A.M.—they get fed. Through this daily reinforcement, they become convinced that there is a God and that He wants them to get rich.

Today, staring fixedly back at the road they just traveled, most investors have rosy expectations. A Paine Webber and Gallup Organization survey released in July shows that the least experienced investors—those who have invested for less than five years—expect annual returns over the next ten years of 22.6%. Even those who have invested for more than 20 years are expecting 12.9%.

Now, I'd like to argue that we can't come even remotely close to that 12.9%, and make my case by examining the key value-determining factors. Today, if an investor is to achieve juicy profits in the market over ten years or 17 or 20, one or more of three things must happen. I'll delay talking about the last of them for a bit, but here are the first two:

(1) Interest rates must fall further. If government interest rates, now at a level of about 6%, were to fall to 3%, that factor alone would come close to doubling the value of common stocks. Incidentally, if you think interest rates are going to do that—or fall to the 1% that Japan has experienced—you should head for where you can really make a bundle: bond options.

(2) Corporate profitability in relation to GDP must rise. You know, someone once told me that New York has more lawyers than people. I think that's the same fellow who thinks profits will become larger than GDP. When you begin to expect the growth of a component factor to forever outpace that of the aggregate, you get into certain mathematical problems. In my opinion, you have to be wildly optimistic to believe that corporate profits as a percent of GDP can, for any sustained period, hold much above 6%. One thing keeping the percentage down will be competition, which is alive and well. In addition, there's a public-policy point: If corporate investors, in aggregate, are going to eat an ever-growing portion of the American economic pie, some other group will have to settle for a smaller portion. That would justifiably raise political problems—and in my view a major reslicing of the pie just isn't going to happen.

So where do some reasonable assumptions lead us? Let's say that GDP grows at an average 5% a year—3% real growth, which is pretty darn good, plus 2% inflation. If GDP grows at 5%, and you don't have some help from interest rates, the aggregate value of equities is not going to grow a whole lot more. Yes, you can add on a bit of return from dividends. But with stocks selling where they are today, the importance of dividends to total return is way down from what it used to be. Nor can investors expect to score because companies are busy boosting their per-share earnings by buying in their stock. The offset here is that the companies are just about as busy issuing new stock, both through primary offerings and those ever present stock options.

So I come back to my postulation of 5% growth in GDP and remind you that it is a limiting factor in the returns you're going to get: You cannot expect to forever realize a 12% annual increase —much less 22%—in the valuation of American business if its profitability is growing only at 5%. The inescapable fact is that the value of an asset, whatever its character, cannot over the long term grow faster than its earnings do.

Now, maybe you'd like to argue a different case. Fair enough. But give me your assumptions. If you think the American public is going to make 12% a year in stocks, I think you have to say, for example, "Well, that's because I expect GDP to grow at 10% a year, dividends to add two percentage points to returns, and interest rates to stay at a constant level." Or you've got to rearrange these key variables in some other manner. The Tinker Bell approach—clap if you believe—just won't cut it.

> The auto industry transformed the world, but many hundreds of car makes became road-kill among them the Berkshire and Omaha.

Beyond that, you need to remember that future returns are always affected by current valuations and give some thought to what you're getting for your money in the stock market right now. Here are two 1998 figures for the FORTUNE 500. The companies in this universe account for about 75% of the value of all publicly owned American businesses, so when you look at the 500, you're really talking about America Inc.

- FORTUNE 500
  1998 profits: **$334,335,000,000**
  Market value on March 15, 1999: **$9,907,233,000,000**

As we focus on those two numbers, we need to be aware that the profits figure has its quirks. Profits in 1998 included one very unusual item—a $16 billion bookkeeping gain that Ford reported from its spinoff of Associates—and profits also included, as they always do in the 500, the earnings of a few mutual companies, such as State Farm, that do not have a market value. Additionally, one major corporate expense, stock-option compensation costs, is not deducted from profits. On the other hand, the profits figure has been reduced in some cases by write-offs that probably didn't reflect economic reality and could just as well be added back in. But leaving aside these qualifications, investors were saying on March 15 this year that they would pay a hefty $10 trillion for the $334 billion in profits.

Bear in mind—this is a critical fact often ignored—that investors as a whole cannot get anything out of their businesses except what the businesses earn. Sure, you and I can sell each other stocks at higher and higher prices. Let's say the FORTUNE 500 was just one business and that the people in this room each owned a piece of it. In that case, we could sit here and sell each other pieces at ever-ascending prices. You personally might outsmart the next fellow by buying low and selling high. But no money would leave the game when that hap-

pened: You'd simply take out what he put in. Meanwhile, the experience of the *group* wouldn't have been affected a whit, because its fate would still be tied to profits. The absolute most that the owners of a business, in aggregate, can get out of it in the end—between now and Judgment Day—is what that business earns over time.

And there's still another major qualification to be considered. If you and I were trading pieces of our business in this room, we could escape transactional costs because there would be no brokers around to take a bite out of every trade we made. But in the real world investors have a habit of wanting to change chairs, or of at least getting advice as to whether they should, and that costs money—big money. The expenses they bear—I call them frictional costs—are for a wide range of items. There's the market maker's spread, and commissions, and sales loads, and 12b-1 fees, and management fees, and custodial fees, and wrap fees, and even subscriptions to financial publications. And don't brush these expenses off as irrelevancies. If you were evaluating a piece of investment real estate, would you not deduct management costs in figuring your return? Yes, of course—and in exactly the same way, stock market investors who are figuring their returns must face up to the frictional costs they bear.

And what do they come to? My estimate is that investors in American stocks pay out well over $100 billion a year—say, $130 billion—to move around on those chairs or to buy advice as to whether they should! Perhaps $100 billion of that relates to the FORTUNE 500. In other words, investors are dissipating almost a third of everything that the FORTUNE 500 is earning for them—that $334 billion in 1998—by handing it over to various types of chair-changing and chair-advisory "helpers." And when that handoff is completed, the investors who own the 500 are reaping less than a $250 billion return on their $10 trillion investment. In my view, that's slim pickings.

Buffett likes to think that if he had been at Kitty Hawk in 1903, he would have been farsighted enough to shoot down Orville's plane.

Perhaps by now you're mentally quarreling with my estimate that $100 billion flows to those "helpers." How do they charge thee? Let me count the ways. Start with transaction costs, including commissions, the market maker's take, and the spread on underwritten offerings: With double counting stripped out, there will this year be at least 350 billion shares of stock traded in the U.S., and I would estimate that the transaction cost per share for each side—that is, for both the buyer and the seller—will average 6 cents. That adds up to $42 billion.

Move on to the additional costs: hefty charges for little guys who have wrap accounts; management fees for big guys; and, looming very large, a raft of expenses for the holders of domestic equity mutual funds. These funds now have assets of about $3.5 trillion, and you have to conclude that the annual cost of these to their investors—counting management fees, sales loads, 12b-1 fees, general operating costs—runs to at least 1%, or $35 billion.

And none of the damage I've so far described counts the commissions and spreads on options and futures, or the costs borne by holders of variable annuities, or the myriad other charges that the "helpers" manage to think up. In short, $100 billion of frictional costs for the owners of the FORTUNE 500—which is 1% of the 500's market value—looks to me not only highly defensible as an estimate, but quite possibly on the low side.

It also looks like a horrendous cost. I heard once about a cartoon in which a news commentator says, "There was no trading on the New York Stock Exchange today. Everyone was happy with what they owned." Well, if that were really the case, investors would every year keep around $130 billion in their pockets.

Bezos on Buffett

Skeptical of Internet mania, the founder and CEO of Amazon.com is spreading the gospel according to Buffett.

Warren Buffett doesn't mention the Internet on these pages. But he does talk about two other transforming industries that failed to reward investors over time: autos and aviation. Only a fool would ignore his implicit warning: A lot of people will lose a lot of money betting on the Internet. Amazon.com founder and CEO Jeff Bezos was so intrigued by Buffett's talk at Herb Allen's gathering of business leaders in Sun Valley, Idaho, last July that he asked Buffett for his lists of the automakers and aircraft manufacturers that didn't make it. "When new industries become phenomenons, a lot of investors bet on the wrong companies," Bezos says. Referring to Buffett's 70-page catalog of mostly dead car and truck makes, he adds, "I noticed that decades ago, it was *de rigueur* to use 'Motors' in the name, just as everybody uses 'dot-com' today. I thought, Wow, the parallel is interesting."

Especially interesting to a billionaire like Bezos, who knows something about stock valuations from his previous career as a hedge fund manager. Interesting also to Bezos the history buff, who likes to talk about the Cambrian explosion about 550 million years ago, when multicelled life spawned unprecedented variation of species—and with it, a wave of extinctions. Given this perspective, Bezos says, Buffett's analogies about bankrupt businesses "resonate deeply." Now Bezos is spreading the gospel according to Buffett and urging Amazon employees to run scared every day. "We still have the opportunity to be a footnote in the e-commerce industry," he says.

— Patricia Sellers

Let me summarize what I've been saying about the stock market: I think it's very hard to come up with a persuasive case that equities will over the next 17 years perform anything like—*anything* like—they've performed in the past 17. If I had to pick the most probable return, from appreciation and dividends combined, that investors in aggregate—repeat, aggregate—would earn in a world of constant interest rates, 2% inflation, and those ever hurtful frictional costs, it would be 6%. If you strip out the inflation component from this nominal return (which you would need to do however inflation fluctuates), that's 4% in real terms. And if 4% is wrong, I believe that the percentage is just as likely to be less as more.

Let me come back to what I said earlier: that there are three things that might allow investors to realize significant profits in the market going forward. The first was that interest rates might fall, and the second was that corporate profits as a percent of GDP might rise dramatically. I get to the third point now: Perhaps you are an optimist who believes that though investors as a whole may slog along, you yourself will be a winner. That thought might be particularly seductive in these early days of the information revolution (which I wholeheartedly believe in). Just pick the obvious winners, your broker will tell you, and ride the wave.

Well, I thought it would be instructive to go back and look at a couple of industries that transformed this country much earlier in this century: automobiles and aviation. Take automobiles first: I have here one page, out of 70 in total, of car and truck manufacturers that have operated in this country. At one time, there was a Berkshire car and an Omaha car. Naturally I noticed those. But there was also a telephone book of others.

All told, there appear to have been at least 2,000 car makes, in an industry that had an incredible impact on people's lives. If you had foreseen in the early days of cars how this industry would develop, you would have said, "Here is the road to riches." So what did we progress to by the 1990s? After corporate carnage that never let up, we came down to three U.S. car companies—themselves no lollapaloozas for investors. So here is an industry that had an enormous impact on America—and also an enormous impact, though not the anticipated one, on investors.

Sometimes, incidentally, it's much easier in these transforming events to figure out the losers. You could have grasped the importance of the auto when it came along but still found it hard to pick companies that would make you money. But there was one obvious decision you could have made back then—it's better sometimes to turn these things upside down—and that was to short horses. Frankly, I'm disappointed that the Buffett family was not short horses through this entire period. And we really had no excuse: Living in Nebraska, we would have found it super-easy to borrow horses and avoid a "short squeeze."

- U.S. HORSE POPULATION
  1900: **21 million**
  1998: **5 million**

The other truly transforming business invention of the first quarter of the century, besides the car, was the airplane—another industry whose plainly brilliant future would have caused investors to salivate. So I went back to check out aircraft manufacturers and found that in the 1919–39 period, there were about 300 companies, only a handful still breathing today. Among the planes made then—we must have been the Silicon Valley of that age—were both the Nebraska and the Omaha, two aircraft that even the most loyal Nebraskan no longer relies upon.

Move on to failures of airlines. Here's a list of 129 airlines that in the past 20 years filed for bankruptcy. Continental was smart enough to make that list twice. As of 1992, in fact—though the picture would have improved since then—the money that had been made since the dawn of aviation by all of this country's airline companies was zero. Absolutely zero.

Sizing all this up, I like to think that if I'd been at Kitty Hawk in 1903 when Orville Wright took off, I would have been farsighted enough, and public-spirited enough—I owed this to future capitalists—to shoot him down. I mean, Karl Marx couldn't have done as much damage to capitalists as Orville did.

I won't dwell on other glamorous businesses that dramatically changed our lives but concurrently failed to deliver rewards to U.S. investors: the manufacture of radios and televisions, for example. But I will draw a lesson from these businesses: The key to investing is not assessing how much an industry is going to affect society, or how much it will grow, but rather determining the competitive advantage of any given company and, above all, the durability of that advantage. The products or services that have wide, sustainable moats around them are the ones that deliver rewards to investors.

This talk of 17-year periods makes me think—incongruously, I admit—of 17-year locusts. What could a current brood of these critters, scheduled to take flight in 2016, expect to encounter? I see them entering a world in which the public is less euphoric about stocks than it is now. Naturally, investors will be feeling disappointment—but only because they started out expecting too much.

Grumpy or not, they will have by then grown considerably wealthier, simply because the American business establishment that they own will have been chugging along, increasing its profits by 3% annually in real terms. Best of all, the rewards from this creation of wealth will have flowed through to Americans in general, who will be enjoying a far higher standard of living than they do today. That wouldn't be a bad world at all—even if it doesn't measure up to what investors got used to in the 17 years just passed. ■

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