

The U.S. Financial Sector and the Relentless Rules of Humble Arithmetic

Remarks by John C. Bogle

Founder and former chief executive, Vanguard

at New York University

New York, NY

November 14, 2007

A few years ago, when I was re-reading *Other People's Money*, by Louis D. Brandeis, I came across a wonderful quotation. In his book, first published in 1914, Brandeis—who would later become one of the most influential jurists in the history of the U.S. Supreme Court—railed against the oligarchs who a century ago controlled financial America and corporate America as well. He described their interlocking and self-serving interests as, “trampling with impunity on laws human and divine, obsessed with the delusion that two plus two make five.” He predicted (accurately, as it turned out) that the widespread speculation of that era would collapse, “*a victim of the relentless rules of humble arithmetic.*” He then added this unattributed warning—I’m guessing it’s from Sophocles—“*Remember, O Stranger, arithmetic is the first of the sciences, and the mother of safety.*”

These words hit me like the proverbial ton of bricks. Why? Because the relentless rules of the arithmetic of investing are so obvious, and recognizing the obvious has, I think, been a major contributor to my career. Indeed, it’s been said (by my detractors) that all I have going for me is “the uncanny ability to recognize the obvious.” The curious irony, however, is that most people either seem to have difficulty recognizing what lies in plain sight, right before their eyes, or, perhaps even more pervasively, refuse to recognize the reality because it flies in the face of their deep-seated beliefs, their biases, and their own self-interest. Paraphrasing Upton Sinclair: “it’s amazing how difficult it is for a man to understand something if he’s paid a small fortune *not* to understand it.” But only by facing the obvious realities of investing will the intelligent investor succeed.

*The opinions expressed in this speech do not necessarily represent the views of Vanguard’s present management.

1. A Parable

The first of the two relentless rules of humble arithmetic I'll mention is a simple one: *Gross return in the financial markets, minus the costs of financial intermediation, equals the net return that we investors share.* To understand that is how our financial system really works. Consider my version of this parable told by Warren Buffett, chairman of Berkshire Hathaway Inc., in the firm's 2005 annual report. It clarifies the foolishness and counterproductivity of our vast and complex financial market system. Here goes:

Once upon a time . . . a wealthy family named the Gotrocks, grown over the generations to include thousand of brothers, sisters, aunts, uncles, and cousins, owned 100 percent of every stock in the United States. Each year, they reaped the rewards of investing: all the earnings growth that those thousands of corporations generated and all the dividends that they distributed. Each family member grew wealthier at the same pace, and all was harmonious. Their investment had compounded over the decades, creating enormous wealth, because the Gotrocks family was playing a winner's game.

But after a while, a few fast-talking Helpers arrive on the scene, and they persuade some "smart" Gotrocks cousins that they can earn a larger share than the other relatives. These Helpers convince the cousins to sell some of their shares in the companies to other family members, and to buy some shares of others from them in return. The Helpers handle the transactions, and as brokers, they receive commissions for their services. The ownership is thus rearranged among the family members.

To their surprise, however, the family wealth begins to grow at a slower pace. Why? Because some of the return is now consumed by the Helpers, and the family's share of the generous pie that U.S. industry bakes each year—all those dividends paid, all those earnings reinvested in the business—100 percent at the outset, starts to decline, simply because some of the return is now consumed by the Helpers.

To make matters worse, while the family had always paid taxes on their dividends, some of the members are now also paying taxes on the capital gains they

realize from their stock-swapping back and forth, further diminishing the family's total wealth.

The smart cousins quickly realize that their plan has actually diminished the rate of growth in the family's wealth. They recognize that their foray into stock-picking has been a failure and conclude that they need professional assistance, the better to pick the right stocks for themselves. So they hire stock-picking experts—more Helpers!—to gain an advantage. These money managers charge a fee for their services. So when the family appraises its wealth a year later, it finds that its share of the pie has diminished even further.

To make matters still worse, the new managers feel compelled to earn their keep by trading the family's stocks at frantic levels of activity, not only increasing the brokerage commissions paid to the first set of Helpers, but running up the tax bill as well. Now the family's earlier 100 percent share of the dividend and earnings pie is further diminished.

“Well, we failed to pick good stocks for ourselves, and when that didn't work, we also failed to pick managers who could do so,” the smart cousins say. “What shall we do?” Undeterred by their two previous failures, they decide to hire still more Helpers. They retain the best investment consultants and financial planners they can find to advise them on how to select the right managers, who will then surely pick the right stocks. The consultants, of course, tell them they can do exactly that. “Just pay us a fee for our services,” the new Helpers assure the cousins, “and all will be well.” Alas, the family's share of the pie tumbles once again.

Alarmed at last, the family sits down together and takes stock of the events that have transpired since some of them began to try to outsmart the others. “How is it,” they ask, “that our original 100 percent share of the pie—made up each year of all those dividends and earnings—has dwindled to just 60 percent?” Their wisest member, a sage old uncle, softly responds: “All that money you've paid to those Helpers and all those unnecessary extra taxes you're paying come directly out of our family's total earnings and dividends. Go back to square one and do so immediately. Get rid of all your brokers. Get rid of all your money managers. Get rid of all your consultants. Then our family

will again reap 100 percent of however large a pie that corporate America bakes for us, year after year.”

They followed the old uncle’s wise advice, returning to their original passive but productive strategy, holding all the stocks of corporate America, and standing pat . . . *and the Gotrocks Family Lived Happily Ever After.*

Adding a fourth law to Sir Isaac Newton’s three laws of motion, the inimitable Warren Buffett puts the moral of his story this way: “For investors as a whole, returns decrease as motion increases.” Accurate as that cryptic statement is, I would add that the parable reflects the profound conflict of interest between those who work in the investment business and those who invest in stocks and bonds. The way to wealth for those *in the business* is to persuade their clients, “Don’t just stand there. Do something.” But the way to wealth *for their investor/ clients* in the aggregate is to follow the opposite maxim: “Don’t do something. Just stand there.” For that is the only way to avoid playing the loser’s game of trying to beat the market.

The higher the level of our own activity by investors, the greater the costs of financial intermediation and taxes, the smaller the net returns that our business owners as a group receive. The lower the costs that investors as a group incur, the higher rewards that they reap. So to realize the winning returns generated by businesses over the long term, the intelligent investor will minimize to the bare bones the costs of our financial system. That’s what common sense tells us, and it’s the truth.

2. Business Reality Trumps Market Expectations

That brings us to my second relentless rule of humble arithmetic. Successful investing is not about the stock market, but about owning all of America’s businesses and reaping the huge rewards provided by the dividends and earnings growth of our nation’s—and, for that matter, our world’s—corporations. For in the very long run, it is how businesses actually perform that determines the return on our invested capital. *Dividend yields, plus earnings growth, account for substantially 100 percent of the return on stocks.* Put another way, that wonderful parable about the Gotrocks family brings home the central reality of investing: “The most that owners in the aggregate can earn between now and Judgment Day is what their business in the aggregate earns,” in the words of Warren Buffett. Illustrating the point with Berkshire Hathaway, the

publicly-owned investment company he has run for 40 years, Buffett says, “When the stock temporarily over-performs or under-performs the business, a limited number of shareholders—either sellers or buyers—receive out-sized benefits at the expense of those they trade with. But over time, the aggregate gains made by Berkshire shareholders must of necessity match the business gains of the company.

How often investors lose sight of that eternal principle! Yet the record is clear. History, if only we would take the trouble to look at it, reveals the remarkable, if essential, linkage between the cumulative long-term returns earned by business—the annual dividend yield plus the annual rate of earnings growth—and the cumulative returns earned by the U.S. stock market. Think about that certainty for a moment. Can you see that it is simple common sense?

Need proof? Just look at the record since the twentieth century began. The average annual total return on stocks was 9.6 percent, virtually identical to the investment return of 9.5 percent—4.5 percent from dividend yield and 5 percent from earnings growth. That tiny difference of 0.1 percent per year arose from what I call speculative return, depending on how one looks at it. Perhaps it is merely statistical noise, or perhaps it reflects a generally upward long-term trend in stock valuations, a willingness of investors to pay higher prices for each dollar of earnings at the end of the period than at the beginning.

Compounding these returns over 106 years produced accumulations that are truly staggering. **(Chart 1)** Each dollar initially invested in 1900 at an investment return of 9.5 percent grew by the close of 2005 to \$14,808. But let’s be fair. If we compound that initial \$1, not at the nominal return of 9.5 percent but at the real (after -inflation) rate of 6.5 percent, the accumulation grows to \$793. But increasing real wealth nearly eight times over is not to be sneezed at. Sure, few (if any) of us have 106 years in us, but, like the Gotrocks family over the generations, the miracle of compounding returns is little short of amazing—it is perhaps the ultimate winner’s game.

Of course there are bumps along the way in the investment returns earned by our business corporations. Sometimes, as in the Great Depression of the early 1930s, these bumps are large. But we get over them. So, if you stand back from the chart and squint your eyes, the trend of business fundamentals looks almost like a straight line sloping gently upward, and those periodic bumps are barely visible.

Stock market returns sometimes get well ahead of business fundamentals (as in the late 1920s, the early 1970s, the late 1990s). But it has been only a matter of time until, as if drawn by a magnet, they soon return, although often only after falling well behind for a time (as in the mid-1940s, the late 1970s, the 2003 market lows).

In our foolish focus on the short-term stock market distractions of the moment, we, too, often overlook this long history. We ignore that when the returns on stocks depart materially from the long-term norm, it is rarely because of the economics of investing—the earnings growth and dividend yields of our corporations. Rather, the reason that annual stock returns are so volatile is largely because of the emotions of investing.

We can measure these emotions by the price/earnings (P/E) ratio, which measures the number of dollars investors are willing to pay for each dollar of earnings. As investor confidence waxes and wanes, P/E multiples rise and fall. When greed holds sway, we see very high P/Es. When hope prevails, P/Es are moderate. When fear is in the saddle, P/Es are very low. Back and forth, over and over again, swings in the emotions of investors momentarily derail the long-range upward trend in the economics of investing.

While the prices we pay for stocks often lose touch with the reality of corporate values, in the long run, reality rules. So, while investors seem to intuitively accept that the past is inevitably prologue to the future, any past stock market returns that have included a high speculative stock return component are a deeply flawed guide to what lies ahead. To understand why past returns do not foretell the future, we need only heed the words of the great British economist John Maynard Keynes, written 70 years ago: “It is dangerous . . . to apply to the future inductive arguments based on past experience, unless one can distinguish the broad reasons why past experience was what it was.”

But if we can distinguish the reasons the past was what it was, then, we can establish reasonable expectations about the future. Keynes helped us make this distinction by pointing out that the state of long-term expectation for stocks is a combination of enterprise (“forecasting the prospective yield of assets over their whole life”) and speculation (“forecasting the psychology of the market”). (*The General Theory*, Chapter 12). I’m well familiar with those words, for 55 years ago I incorporated them in my senior thesis at Princeton, written (providentially for my lifetime

career that followed) on the mutual fund industry. It was entitled, “The Economic Role of the Investment Company.”

This dual nature of returns is reflected when we look at stock market returns over the decades. Using Keynes’s idea, I divide stock market returns into two parts: (1) Investment Return (enterprise), consisting of the initial dividend yield on stocks plus their subsequent earnings growth, which together form the essence of what we call “intrinsic value”; and (2) Speculative Return, the impact of changing price/earnings multiples on stock prices. Let’s begin with investment returns on the average annual investment return on stocks over the decades since 1900. **(Chart 2a)** Note first the steady contribution of dividend yields to total return during each decade; always positive, only once outside the range of 3 percent to 7 percent, and averaging 4.5 percent.

Then note that the contribution of earnings growth to investment return, with the exception of the depression-ridden 1930s, was positive in every decade, usually running between 4 percent and 7 percent, and averaging 5 percent per year. Result: Total investment returns (the top line, combining dividend yield and earnings growth) were negative in only a single decade (again, in the 1930s). These total investment returns—the gains made by business—were remarkably steady, generally running in the range of 8 percent to 13 percent each year, and averaging 9.5 percent.

Enter speculative return. **(Chart 2b)** Compared with the relative consistency of dividends and earnings growth over the decades, truly wild variations in speculative return punctuate the chart as price/earnings ratios (P/Es) wax and wane. A 100 percent rise in the P/E, from 10 to 20 times over a decade, would equate to a 7.2 percent annual speculative return. Curiously, without exception, every decade of significantly negative speculative return was immediately followed by a decade in which it turned positive by a correlative amount—the quiet 1910s and then the roaring 1920s, the dispiriting 1940s and then the booming 1950s, the discouraging 1970s and then the soaring 1980s—reversion to the mean (RTM) writ large. Then, amazingly, there is an unprecedented second consecutive exuberant increase in speculative return in the 1990s, a pattern never before in evidence.

By the close of 1999, the P/E ratio had risen to an unprecedented level of 32 times, setting the stage for the return to sanity in valuations that soon followed. The tumble in stock

market prices gave us our comeuppance. With earnings continuing to rise, the P/E currently stands at 18 times, compared with the 15 times level that prevailed at the start of the twentieth century. As a result, speculative return has added just 0.1 percentage points to the annual investment return earned by our businesses over the long term.

When we combine these two sources of stock returns, we get the total return produced by the stock market. **(Chart 2c)** Despite the huge impact of speculative return—up and down—during most of the individual decades, there is virtually no impact over the long term. The average annual total return on stocks of 9.6 percent, then, has been created almost entirely by enterprise, with only 0.1 percentage point created by speculation. The message is clear: in the long run, stock returns depend almost entirely on the reality of the investment returns earned by our corporations. The perception of investors, reflected by the speculative returns, counts for little. It is economics that controls long-term equity returns; emotions, so dominant in the short-term, dissolve.

After almost 55 years in this business, I have little conviction about how to forecast these swings in investor emotions, nor when they will occur, although it is clear that when p/es are high (say above 25) they are apt, ultimately to decline and when they are low (say, below 12) they are apt ultimately to rise. But, largely because the arithmetic of investing is so basic, I can forecast the long-term economics of investing with remarkably high odds of success. Why? Simply, it is investment returns—the earnings and dividends generated by American business—that are almost entirely responsible for the returns delivered in our stock market. Put another way, while illusion—the momentary prices we pay for stocks—often loses touch with reality—the intrinsic values of our corporations—in the long run it is reality that rules.

To drive this point home, think of investing as consisting of two different games. Here's how Roger Martin, dean of the Rotman School of Management of the University of Toronto, describes them. One is “the real market, where giant publicly held companies compete. Where real companies spend real money to make and sell real products and real services, and, if they play with skill, earn real profits and pay real dividends. This game also requires real strategy, real determination, and real expertise; real innovation and real foresight.”

Loosely linked to this game is another game, the expectations market. Here, prices are not set by real things like sales margins or profits. In the short-term, stock prices go up only when

the expectations of investors rise, not necessarily when sales, margins, or profits rise. But in the long-run, the ephemeral role of expectations and emotions—hope, fear, and greed—are washed away by the eternal (and transcendent) power of business reality.

To this crucial distinction, I would add that the expectations market is not only a product of the expectations of active investors but the expectations of active speculators, trying to guess what these investors will expect, and how they will act as each new bit of information finds its way into the marketplace. The expectations market is about speculation. The real market is about investing. The only logical conclusion: *the stock market is a giant distraction from the serious business of investing*. The market causes investors to focus on transitory and volatile investment expectations rather than on what is really important—the gradual accumulation of the returns earned by corporate business.

My advice to you is to ignore the short-term noise of our emotions reflected in our financial markets and focus on the productive long-term economics of our corporate businesses. Shakespeare could have been describing the inexplicable hourly and daily—sometimes even yearly or longer—fluctuations in the stock market when he wrote, “[It is] like a tale told by an idiot, full of sound and fury, signifying nothing.” The way to investment success is to get out of the expectations market of stock prices and cast your lot with the real market of business. Simply heed the timeless distinction made by Benjamin Graham, legendary investor, author of *The Intelligent Investor*, and mentor to Warren Buffett. He was right on the money when he put his finger on the essential reality of investing: “In the short run the stock market is a voting machine . . . (but) in the long run it is a weighing machine.”

3. Who Earns the Stock Market's Returns?

But whatever returns the stock market is generous enough to deliver in the years ahead, please don't make the mistake of thinking that investors actually earn those returns. To explain why this is the case, we need only to return to that first relentless rule of humble arithmetic that explains the simple mathematics of investing: All investors as a group must necessarily earn precisely the market return, *but only before the costs of investing are deducted*. After subtracting all the costs of financial intermediation are deducted—all of those management fees, all of those transaction costs, all of those distribution costs, all of those marketing costs, all of those operating costs—the returns of investors must and will and do fall short of the market return by an amount

precisely equal to the aggregate amount of those costs. In a market that returns 10 percent, we investors as a group earn 10 percent (Duh!), pay our financial intermediaries, and then pocket whatever remains.

Two conclusions: 1) *Beating the market before costs is a zero-sum game*; 2) *Beating the market after costs is a loser's game*. The returns earned by investors in the aggregate inevitably fall well short of the returns that are realized in our financial markets. How much do those costs come to? In equity mutual funds, management fees and operating expenses—the "expense ratio"—average about 1.4 percent per year of fund assets. **(Chart 3)** Add another half of 1 percent to 1 percent in portfolio turnover costs—let's call it 0.7 percent—and, say, another 0.5 percent to 1 percent in the annual impact of front-end sales loads; say, another 0.7 percent. Result: the total cost of equity fund ownership comes to roughly 2.8 percent per year. So yes, *costs matter*. The great irony of investing, then, is not only that you don't get what you pay for. The reality is quite the opposite: You get precisely what you *don't* pay for. *So if you pay for nothing, you get everything*.

How much do costs matter? A ton! Indeed, fund costs have played the determinative role in explaining why, for example, during the quarter-century from 1980–2005, when the return on the stock market itself averaged 12.5 percent per year, the pre-tax return on the average mutual fund averaged just 10.0 percent. That 2.5 percent differential is about what one might have expected, given our 2.8 percent rough estimate of fund costs. Simply put, fund managers have arrogated to themselves an excessive share of the financial markets' returns, and have left fund investors with too small a share.

On first impression, that annual gap may not look large, but when compounded over 25 years it reaches really staggering proportions. **(Chart 4a)** In fact, \$1000 invested in a simple S&P 500 Index Fund returned 12.3 percent per year during that period (the market return of 12.5 percent less costs of just 0.2 percent), growing by \$17,080. By way of contrast, the average equity mutual fund's return of 10.0 percent grew that original \$1,000 by just \$9,820, or little more than half as much (57 percent of the total).

But it gets worse for the equity funds. With all of their frantic portfolio turnover—trading stocks, essentially with one another, at a rate of 100 percent per year—the average actively-managed fund surrendered 1.8 percent of that annual return to taxes, bringing the after-

tax return to 8.2 percent and reducing the compound cumulative profit to \$6,170. **(Chart 4b)** If that sounds like a pretty good profit, just compare it with the after-tax profit with our 500 Index Fund, which has virtually no turnover. Its owners were subjected to income taxes of only 0.6 percent per year (largely on the divided income generated by the fund), with a net after-tax return of 11.7 percent. Result: a net profit of \$14,820, or nearly two-and-one-half *times* the profit on the average managed fund.

And now a cold shower of financial reality. Let's make one final adjustment to our returns. So far, we've done all our measurements in *nominal* dollars, ignoring the fact that it is only *real* dollars—dollars that are adjusted to take inflation into account—that are available for us to spend. During the past 25 years, inflation averaged 3.3 percent, reducing the real after-tax return of the index fund to 8.4 percent, and the average fund to but 4.9 percent. **(Chart 4c)** Cumulative *real* profit after compounding on the original \$1,000 investment: just \$2,270 for the average actively-managed equity fund; \$6,450 for the passively-managed index fund. The average fund produced only about one-third of the profit earned by the market itself through the simple index fund, which was there for the taking. Dare I remind you yet again, fund expenses and taxes matter! Indeed, they make the difference between investment success and investment failure.

In investing, then the relentless rules of humble arithmetic—the subtraction of the logical, inevitable, and unyielding penalty assessed by investment costs, excessive taxes, and rising living costs—devastates the returns that investors in mutual funds earn over time. Using Justice Brandeis's formulation, the mutual fund industry is obsessed with the delusion—and is foisting that delusion on investors—that a *nominal gross* return of 12 ½ percent per year in the stock market, minus fund expenses of 2.5 percent, minus taxes of 1.8 percent, and minus inflation of 3.3 percent, still equals a *real net* return of 12 ½ percent. *Well, to state the obvious, it doesn't!* And unless the fund industry changes, it will falter and finally fail, a victim, yes, of the relentless rules of humble arithmetic. Were he here in your class this evening, Justice Brandeis surely would have warned, "*Remember, NYU students, that arithmetic is the first of the sciences and the mother of safety.*"

4. Our Financial Economy

The mutual fund industry is hardly unique in the oppressive level of its costs. In fact, it is a sort of poster child for the escalating costs that investors incur all across our nation's system of financial intermediation. The direct costs of the mutual fund system (largely management fees and operating and marketing expenses) are currently running at an annual rate of almost \$100 billion, but funds are also generating transaction fees to our brokerage firms and investment bankers, and to their lawyers and all those other facilitators.

Mutual fund expenses, plus fees paid to hedge fund and pension fund managers, plus advisor fees and trading costs and investment banking fees and all the other costs of the system will total about \$528 billion this year. (**Chart 5**) But don't forget that these costs recur year after year. If the present level holds for the next decade (I'm guessing that it will grow), total intermediation costs would come to a staggering \$5 trillion. (Think about these cumulative costs relative to the \$16 trillion value of the U.S. stock market and the \$26 trillion value of our bond market.)

Does this explosion in intermediation costs create an opportunity for money managers? You better believe it does! Does it create a problem for investors? You better recognize that too. For as long as our financial system delivers to our investors in the aggregate whatever returns our stock and bond markets are generous enough to deliver, but only *after* the costs of financial intermediation are deducted, these enormous costs seriously undermine the odds in favor of success for our citizens who are accumulating savings for retirement. Alas, the investor feeds at the bottom of the costly food chain of investing.

This is not to say that our financial system creates only costs. It creates substantial value for our society. It facilitates the optimal allocation of capital among a variety of users; it enables buyers and sellers to meet efficiently; it provides remarkable liquidity; it enhances the ability of investors who wish to capitalize on the discounted value of future cash flows, and other investors who wish to acquire the right to those cash flows; it creates financial instruments (so-called "derivatives," albeit often of mind-boggling complexity) that enable investors to divest themselves of a variety of risks by transferring those risks to others. No, it is not that the system fails to create benefits. The question is whether, on the whole, the costs of obtaining those benefits have reached a level that overwhelms those benefits.

Whatever the benefits, the tremendous drain on investment returns represented by the costs of our investment system raises serious questions about the efficient functioning not only of that investment system, but of our entire society. Over the past two centuries, our nation has moved from being an agricultural economy, to a manufacturing economy, to a service economy, and now to what is predominantly a financial economy. But the costs that we incur in our financial economy, by definition, subtract from the value created by our productive businesses.

Think about it. When investors—individual and institutional alike—engage in far more trading—inevitably with one another—than is necessary for market efficiency and ample liquidity, they become, collectively, their own worst enemies. To reiterate: while the owners of business enjoy the dividend yields and earnings growth that our capitalistic system creates, those who play in the financial markets capture those investment gains only *after* the costs of financial intermediation are deducted. Thus, while investing in American business is a *winner's game*, beating the stock market before those costs—for all of us as a group—is a *zero-sum game*. And after intermediation costs are deducted, beating the market becomes a *loser's game*.

The rise of the financial sector is one of the seldom-told tales of the recent era. (**Chart 6**) Twenty-five years ago, financials accounted for only about 5 percent of the earnings of the 500 giant corporations that compose the Standard & Poor's 500 Stock Index. Fifteen years ago, the financial sector share had risen to 10 percent, then to 20 percent in 1997, and to a near-peak level of 27 percent in 2007.

If we add to this total the earnings of the financial affiliates of our giant manufacturers (think General Electric Capital, for example, or the auto financing arms of General Motors and Ford) financial earnings now likely exceed one-third of the annual earnings of the S&P 500. In fact, (**Chart 7**) the finance sector is now by far our nation's largest generator of corporate profits, larger even than the *combined* profits of our huge energy and health care sectors, and almost three *times* as much as either industrials or information technology.¹

To some degree, of course, the growth of the financial sector reflects not just the rise in demand for financial services (the mutual fund industry is a good example). It also reflects the fact that many privately-owned firms have become publicly-owned, including investment banking firms, mutual fund managers, once-mutual insurance companies, even our stock

¹ Standard & Poor's Corporation.

exchanges. For example, there were 56 stocks in the S&P financial sector in 1989, including 28 banks; today there are 92 stocks, but only 26 banks. The combination of public ownership and earnings growth has been dramatic. For example, earnings of fund manager T. Rowe Price rose from \$4 million in 1981 to \$582 million in the twelve months ended June 30, 2007.

In any event, we're moving, or so it seems, toward becoming a country where we're no longer *making* anything. We're merely *trading* pieces of paper, swapping stocks and bonds back and forth with one another, and paying our financial croupiers a veritable fortune. We're also adding even more costs by creating ever more complex financial derivatives in which huge and unfathomable risks are being built into our financial system. "When enterprise becomes the bubble on a whirlpool of speculation," as the great British economist John Maynard Keynes warned us 70 years ago, the consequences may be dire. "When the capital development of a country becomes a by-product of the activities of a casino, the job (of capitalism) is likely to be ill-done" (1936).

5. Lower Equity Returns in Prospect?

The burdensome costs of financial intermediation are all too likely to occur in an era of falling returns on equities, and the arithmetic is not good. Briefly put, the 100-year return of 9 ½ percent annually on stocks included a 4 ½ percent dividend yield. **(Chart 8)** Today's 1.8 percent yield represents a dead-weight loss of 2.7 percentage points in future investment returns. By the same token, the glorious 12 ½ percent return of the past 25 years included not only a 3.4 percent dividend yield, but a speculative return averaging 1.7 percent per year, borne of a price-earnings ratio that doubled on balance, from 9 times to 18 times. The sharp drop in yields, and the likelihood (in my view) that today's price-earnings ratio of 18 will not only *not* redouble, but, in my judgment, is likely to decline by a few points in the coming decade, means that we are likely to experience a future return on stocks of about 7 percent.

Shamelessly, I persist in reducing that *nominal* annual return of 7 percent by the estimated 2.3 percent expected rate of inflation, slashing it to a *real* return of just 4.7 percent. **(Chart 9)** If annual mutual fund costs—sales loads, expense ratios, and hidden turnover costs—continue to run at about 2.5 percent, those costs will reduce the real return of the average fund by more than half, to a humble 2.2 percent. (And I have even deducted those excessive taxes.) Clearly, reducing investment costs is at the crux of the ability of our nation's families—the very backbone of our savings base—to earn the wealth to which they aspire.

Yet most economists have been indifferent to the issue of costs in our financial sector. Even the seminal paper on transaction costs, “The Nature of the Firm,” by Ronald H. Coase (1937), only became broadly accepted after he received the Nobel Prize in economics in 1991. A paper by economists at Harvard University and the University of Chicago in that same year argued that when excessive rewards go to “rent-seekers” whose returns come from the *redistribution* of wealth rather than the *creation* of wealth—they single out government, law, and financial services (including stock traders and money managers)—the economy suffers.

Despite the obvious importance of this issue, I know of not a single academic study that has systematically attempted to calculate the value extracted by our financial system from the returns earned by investors, nor (as far as I know) has a single article on the subject ever appeared in the *Journal of Portfolio Management* or the *Financial Analysts Journal*. It is high time for our profession to join with academia and at long last tackle this vital issue of investment costs and how they relate to the benefits of an efficient system of capital formation. We must not only think about it, but study it in depth, and ultimately to demand that our nation’s system of financial intermediation function far more effectively in the national public interest and in the interest of investors than it does today.

6. Conclusion

While my entire career has been in our financial sector, I’m also a critic who has come to believe—with only the relentless rules of humble arithmetic to support my position that investors are ill-served by today’s financial system. Its participants garner excessive rewards, inevitably at the expense of the investors who risk their capital. This issue is well-defined by this 19th century quotation from “across the pond.”

Some men wrest a living from nature; this is called work.

Some men wrest a living from those who wrest a living from nature; this is called trade.

Some men wrest a living from those who wrest a living from those who wrest a living from nature; this is called finance.

All I'm trying to do is make sure that those who earn their livings from work and from trade get a fair shake. Once a profession in which business was subservient, the field of money management has largely become a business in which the profession is subservient. Harvard Business School Professor Rakesh Khurana was right when he defined the standard of conduct for a true professional with these words: *"I will create value for society, rather than extract it."* And yet money management, by definition, extracts value from the returns earned by our business enterprises. Warren Buffett's wise partner Charlie Munger lays it on the line:

"Most money-making activity contains profoundly antisocial effects . . . As high-cost modalities become ever more popular . . . the activity exacerbates the current harmful trend in which ever more of the nation's ethical young brainpower is attracted into lucrative money-management and its attendant modern frictions, as distinguished from work providing much more value to others."

Yet even as I speak tonight, I read that this brainpower is pouring into financial services at a breathtaking rate. Today, the number CFAs (Chartered Financial Analysts) is at a record high of 78,000, and *Barron's* recently reported that "no fewer than 140,000 new applicants—also a record high—from every corner of the earth are queued up to take the exams that will confer on the lucky ones the coveted (CFA) imprimatur." In one sense this explosion is wonderful, suggesting that our professional designation is highly valued. But it also raises serious concerns that the field will get more and more crowded, causing the costs of financial intermediation will to rise to even higher levels.

This is not to say that bright individuals from today's remarkable younger generation should not enter the profession of money management. Rather, it is to say that those who enter this field should do so with their eyes wide open, recognizing that any endeavor that extracts value from its clients may, in times more troubled than these, find that it has been hoist by its own petard. While it is said on Wall Street that "money has no conscience," the future leaders of this profession must not let that truism cause them to ignore their own consciences, nor to alter their own conduct and character. Indeed, I expect you future leaders to bring to the operation of our system of financial intermediation a level of honest introspection that I find too often lacking among today's leaders, and a return to our traditional focus on fiduciary duty, and on service to others before service to self.