# **Markets in Crisis**

John C. Bogle and Rodney N. Sullivan, CFA

n John C. Bogle's recent *Financial Analysts Journal* article "Black Monday and Black Swans," the esteemed financial expert wrote about the plethora of risks that arose during the recent financial turmoil. With this context in mind, in October 2008, the *FAJ*'s associate editor, Rodney N. Sullivan, CFA, interviewed Mr. Bogle about the global market crisis and his outlook for the future of the global economy.

**Sullivan:** I think it's fair to say that the structural bull market that began some 20 years ago in the aftermath of the Cold War has come to an end. During this bull market, it's probably also fair to say that we've had, on occasion, a few rather painful disruptions. The current disruption has brought with it staggering losses with likely lingering effects. The plethora of risks that you describe in your *FAJ* article "Black Monday and Black Swans" (Bogle 2008a) has seemingly turned into a black swan event. Tell us about some of the factors that led you to suggest in your article that investors were severely underestimating risks.

**Bogle:** As I said in my article, history has not dealt kindly with investors in the aftermath of protracted periods of low-risk premiums. We were warned about this by former Fed chairman Alan Greenspan. It's not only the risks in the financial sector but also the unacknowledged risks that characterize our society. Here, I mean things like Social Security and Medicare payments and their impact on our deficit, not to mention our trade deficit. So, we have underestimated and understated our budget deficit. We've taken on this huge expenditure of \$1 trillion, at least, in wars in Iraq and Afghanistan. And we have the threat of global warming. Those kinds of things are real in terms of how our economy and markets perform but are often unacknowledged, and the same thing is true of this truly unfettered, global competition that we've been facing.

I also noted in the article that other risks are even more subtle. Just think about our political system: Never more apparent than today, it is dominated by money and vested interests, with the U.S. Congress and the administration focused so heavily on the short term. Their actions in the recent crisis may be a little improvement on that, but not enough. Another kind of big risk that I see in the economy is the vast chasm between the wealthiest—the upper crust

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Innovation in
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the investors.

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*Editor's Note*: For a webcast/podcast based on John C. Bogle's article "Black Monday and Black Swans," go to www.cfawebcasts.org/cpe/what.cfm?test\_id=822.

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of our society, if you will, the top 1 percent—and the lower part of our society. As I pointed out in my article, something like 20 percent of Manhattan residents earn less than \$8,900 a year. That's not a formula for national success and national growth.

It is very much a societal problem and not merely a financial market problem—we focus on money over achievement, on charisma over character, on the ephemeral over the eternal. And I think a paucity of leadership is the final big risk that we're facing. These are the nonfinancial risks, the sort of unseen risks. So, the risks are high and the uncertainties are rife, as I wrote in the article, and there seemed to be a hope at the time that we'd be able to muddle through. But the fact of the matter is that one year after first discussing these concerns in a speech to the Risk Management Association in October 2007, global markets are down considerably. So, as I concluded in the article, a business slowdown and recession lay ahead, and the risks I described are beginning to manifest themselves into a black swan event. So, if we don't have a black swan, maybe we have some sort of dark-gray swan.

**Sullivan:** Peter Bernstein refers to black swans as unknown unknowns. Tell us about the nature of black swan events. Can you see them coming? Or by their very nature, are they random, nonpredictable events?

**Bogle:** They are never *not* predictable, but they are certainly not expected by the consensus. They come out of the blue. Nicholas Taleb's book The Black Swan (2007) covers the three basic characteristics of a black swan: First, it's an outlier beyond the realm of our regular expectations. That is, it occurs rarely. Second, it's an event that carries an extreme impact. Third and most important, after it occurs, human nature enables us to accept what happens by concocting explanations that make it seem so predictable, which Taleb calls retrospective predictability—that is, we say we knew it was coming even though we didn't say so at the time. The classical definition of a black swan event is the combination of these three elements—it's rare, it's extreme, and it possesses retrospective predictability. I think that is what we are having right now.

**Sullivan:** Is it true that all market bubbles tend to build and burst in much the same way, leading some to suggest that we "never learn from our mistakes"? That is, is the current crisis unique or is it in some sense a repeat of past crises?

**Bogle:** There is always an element of repetition, and this present crisis has that. In particular, one element was cheap credit—low interest rates, lax credit standards—and a failure to regard risk properly. Investors refuse to concede that certain firms or financial instruments have very high risk. Therefore, we take very large risks, to some degree unknowingly. But, of course, each crisis has its own differences. Indeed, as we all know, the real interest rate was negative for about three years. Money was, in effect, free. So, we had negative real rates leading to investors playing a lot of games with borrowed money.

What is very different this time is the tremendous erosion of credit standards in the corporate issuance of bonds or bondlike securities collateralized debt obligations. Then, add something that simply hasn't existed as an important force before: credit default swaps. Such derivatives enable investors to gamble on the level of prices or on the level of credit default and to do so in a way that is unknown, unrecorded, and obscure. Under the Gramm-Leach-Bliley Act of 1999, the Commodity Futures Trading Commission concluded that credit default swaps were technically a commodity and therefore not subject to U.S. SEC regulation, reporting standards, and disclosure. We've always taken these safeguards for granted in our society. But here they are being ignored, and nobody really knows the full depth of the problem. Remarkably, there is said to be around \$2 trillion of credit-related borrowing. But there is \$62 trillion in notional credit default swaps. That means there is 31 times as much betting on the future of corporate defaults as there are bonds that can possibly default. Furthermore, it's a problem of knowing not only what the volumes are but also who the counterparties are. In the event of a default, they don't even know who the counterparty is that owes them the money, and that's what has made this financial crisis so extreme. These instruments have been spread around the globe. Clearly, firms in every major nation have been involved in them, and that is different from previous crises.

And another difference is visible in the trend toward ownership of securities and, particularly, stocks by institutional investors rather than individuals. Fifty years ago, individuals owned 92 percent of all stocks and financial institutions owned 8 percent. Today, individuals own only 24 percent of all stocks and institutions own 76 percent. I think a central problem is that these institutions have not behaved in an appropriate manner.

They've not only abandoned their investment *principles*; they've also abandoned their *principals*. In the latter case, these are the investors they're supposed to be representing.

Let me take principles first. Investment principles used to be focused on the wisdom of longterm investing rather than the folly of short-term speculation. Yet, we are witnessing an orgy of speculation in the market, the likes of which we have literally never seen in the United States. For example, in 1928, during the old speculative high, stocks had about a 140 percent annual turnover rate. In the 1950s and 1960s, when I first came into this business, turnover in the stock exchange had dropped from that speculative level to about 30 percent a year. In 2006, it rose to 200 percent. In 2007, it was 280 percent. And this year, turnover of stock is running at 320 percent. In sum, when I came into this business, there might have been two, three, or maybe four days in the course of a year in which the stock market would go up or down by 2 percentage points or more. Since the end of July 2007, there have been not two, three, or four such days; there have been 52 2-percent moves—21 upward and 31 downward. So, what is driving the market now is not traditional long-term investing but untraditional and excessive short-term speculation. The market is being driven by people who are betting on future prices rather than investing with the intent to own part of a business and enjoy the returns it earns on its capital.

Investment professionals—for example, pension trustees and mutual fund managers—who represent their investor-principals have been very conflicted. Many of these institutions have put their own interests—accumulating assets and earning large fees—ahead of the interests of their investors. Putting investor interests first is the way fiduciary standards are supposed to work. So, we've changed things; we have built a very different world in this recent era, say, over the past 25 or 35 years. The correctness of traditional investment principles and the legal requirement of serving principals first have not been totally abandoned, but they are certainly out of the mainstream of investing today.

**Sullivan:** Some people have suggested that we put into place a central clearinghouse for various OTC market derivatives. Do you think this is a good step forward, at least in helping to mitigate counterparty risks?

**Bogle:** Yes, it is an absolutely essential step forward. Capitalism and free markets have been built on the premise of the sunlight of full disclosure. We must know who the counterparties are, what the trading volume is, and what the prices are in those markets. Also, we must have a way to put a reasonable valuation on these derivatives. A lot of market participants won't like it, but given the seriousness of recent events, we're going to have to put up with some things that we initially might not like.

**Sullivan:** With the current culling of the weak, are we witnessing Joseph Schumpeter's "creative destruction"? In the end, will we find that the strongest have emerged, thus ultimately making recent events a healthy process?

**Bogle:** I think the financial system is somewhat of a throwback to traditional ideas about Schumpeterian capitalism, the power of innovation—out with the old and in with the new. But this is different because innovation in the financial field has, by and large, been carried out to serve the innovators and not to serve the investors. We're always looking for a new product in the mutual fund business, the banking business, or the investment banking business. If it's more complex, so much the better, and if nobody can understand it at all, even better still. So, I think we have to look at financial market innovation in a very different light.

For instance, I believe it is clear that the innovation of credit derivatives has hurt. Consider not just derivatives on credit default swaps but also derivatives in the S&P 500 Index. The market capitalization of the S&P 500 is now about \$10 trillion, and there are some \$29 trillion worth of futures and options outstanding in the S&P 500—approximately two and a half times the amount of the market value of the index itself. Those derivatives, futures, and options, as everybody knows, are simply bets. Investors in these instruments are gambling on the future price of the index. Admittedly—and this is what makes the subject particularly interesting—those derivatives can be used to hedge risks. For example, you're long on the S&P 500 and you're short on the futures. Therefore, you've eliminated the stock market risk from the list of things that you're concerned about in your portfolio. But there is the exact opposite side, however, where you buy a Standard & Poor's futures contract on margin and bet that the market is going up, or even worse, you sell a Standard & Poor's futures contract with the expectation or the hope that the price will go down. That is just naked speculation.

Combined, these derivatives markets present our society and financial system with untold risk. Unfortunately, there's no way of telling how many investors are using these instruments to speculate and how many are using them to hedge risk. Thus, I think we have to be very careful about worshiping financial innovation. Most mutual fund innovations simply don't work; based on fads or on performance chasing, they come and they go. That's not to say there have not been a few good innovations in the financial field. The index fund is a good innovation, not because it has any magic—anyone can figure it out—but simply because by owning the market at very low cost you will, by definition, do better than everyone who owns the market at a very high cost. So, hats off to some innovation, but most innovation is done for marketing reasons. Most innovation, I fear, is meant to serve the interests of the providers, the marketers, or the innovators rather than those who are persuaded to buy into the innovation.

**Sullivan:** As you suggest, innovations can help improve market efficiency, but the flip side is that innovations can be misused and misunderstood. Investors' hunger for higher returns has pressured rapid innovation, which has seemingly led to an expansion of new, sophisticated, and riskier product structures. Discuss investor appetite for innovation as it relates to returns and investors' stubborn disregard for risk.

**Bogle:** Let's go back to basic principles: Returns are not within our control in the financial markets. For example, there is a given return in the bond market. The future return on a U.S. Treasury security or high-quality corporate bond, for example, is tied almost entirely to today's yield. So, we can say with some clarity, I think, that even though the bond market has been a little rough-and-tumble lately, the return on bonds in the years ahead will be close to today's yield. (There is default risk with corporates, so this yield may overstate future returns.) I believe investors can look for future returns of around 5 percent on a diversified portfolio of high-quality bonds (part government, part highquality corporates); that is the return that the market is offering. If you want to reach for higher return something I would never advise investors to do—don't think you can outyield the market because you're going to be taking more risks and maybe more incomprehensible risks than you expect.

Let me give a simple example. Suppose banks are earning 6 percent on their bond portfolios and making a margin of 1 percent on those portfolios. If

these banks can instead generate a 7 percent return, their margins double, from 1 percent to 2 percent. That takes us to still another area that has created a lot of risk: the demand by investors—speculators, really, who dominate the market today—for corporations to keep increasing their earnings growth rate. This cannot be done. There is a natural growth rate in Corporate America. We ought to know this.

All you have to do is look at the GDP data and you will see that the corporate share of GDP corporate earnings after taxes as a percentage of GDP—generally runs about 6 percent. Sometimes, it drops to 4 percent; sometimes, it goes up to 8 percent. Near the end of 2007, it was about 10-11 percent. Corporate earnings' share of GDP is almost by necessity a very stable number because corporations cannot get an ever-increasing share of GDP any more than labor unions or working people can get an ever-increasing share. At some point, the natural rules of capitalist competition apply. The idea is not to speculate and try to outguess the system. The market return is determined for all of us as a group. So, the idea is to lower your costs as much as possible and thus acquire the highest share of market return that you possibly can.

**Sullivan:** Some people suggest that our financial regulatory framework is geared toward solving yesterday's challenges rather than tomorrow's challenges. Some people also suggest that regulation is rather onerous and thus should be minimized. Give us your views on whether our regulatory framework can and should play a more proactive role in the markets, and if so, can regulation also foster innovation and growth?

**Bogle:** I'm not a believer in heavy regulation. The government has a hard time doing things better than the capitalistic system can do for itself because the latter offers a kind of Adam Smithian invisible hand whereby looking after our own interests is, finally, in the public interest. But unfortunately, our capitalistic system has broken down. What we are seeing now is largely without precedent. The profits of innovation and growth are privatized, but it now turns out that we've socialized the risk-whether it's the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac) or the entire banking system. That does not work. You cannot have the government putting up its capital and not taking a strong regulatory role, to say nothing of a strong ownership role.

So, is there a way to have wise regulation based on judgment rather than firm rules or processes? Can we develop a new perspective on what we mean by regulation? There are now fewer big banks in the United States than ever before. It seems inconceivable that the government can put up capital in these banks and not play a role in how that capital is handled. And I think that taxpayers—whose money it is, after all—have a right to demand to play a role. So, we're going to have to have regulation. It has to be done by the government, but I hope it is done wisely—maybe by a quasi-governmental organization, a Federal Reserve-type institution, rather than the federal government itself. And I think a first step would be to set certain capital requirements, certain limitations on leverage, and certain quality standards that characterize the investment portfolio of financial institutions.

We have now proved beyond a shadow of a doubt that 32 to 1 is too much leverage for our financial system. Clearly, higher leverage can go along with higher portfolio quality. For example, if a firm had 30-to-1 leverage with a portfolio of nothing but Treasury bills, it would be hard to argue that that leverage was excessive. When the assets are composed entirely of a collateralized debt obligation, however, 30 to 1 is clearly too high. There has to be some relationship between credit standards and leverage.

I'm not a big believer in government involvement in executive compensation. But the government—now a significant, nonvoting shareholder in all of these banks—cannot let executive compensation go unacknowledged as a major issue. In particular, consider these huge golden parachutes that so many executives receive after taking on substantial risks in their companies. The executives prosper in good times, get fired when the risks come home to roost, and don't give anything back. I think we definitely need appropriate regulations, and I would hope that it would be through some sort of a quasi-governmental regulatory agency like the Fed, which is quite well respected.

I do want to be clear, though, that the Fed, which I've always thought of as an unusually high-quality quasi-governmental institution, has a lot to answer for in all this. At least one Fed governor argued very strongly about the lunacy of having mortgage banking firms selling mortgages to people who could not afford them. But the Fed did not

take the next steps to mitigate the problem. Furthermore, the Fed agreed with those who thought that the various credit derivatives were wonderful ways to spread risk although, in fact, they were wonderful ways to take excessive risk. I think we can always learn from what went wrong in the crisis that we're now facing today. Of course, the next crisis will be different. They are always different, but there are parallels time after time that usually have to do with easy credit, low credit standards, and the economy being flooded with money at a very low rate—all of which make it too easy to borrow.

**Sullivan:** What can be done, in your view, to right ourselves and to restore faith in the global financial markets?

**Bogle:** My remedies would be pretty extreme, and some of them, I think, are common sense. First on my list would be Wall Street acknowledging that they owe Main Street an apology. If we believe—and many people do—that repentance has to precede forgiveness and if Wall Street wants to get Main Street's confidence back, I think the leaders of those banks and investment banks that remain, along with the securities exchanges and investment associations, should join in a public statement describing what went wrong in the financial sector and accept the primary responsibility. They should also describe how they intend to avoid similar problems in the future. It can be pretty tough for people to apologize, and in following the news, it seems that the present leaders think they are free from any blame in what went wrong. It would surprise and disappoint me if they feel that way. I think that having a little introspection, standing up, and saying, "Here is where we went wrong, we want to take the responsibility for it, and here is how we'll fix this in the future," is a really important thing.

Wall Street is not alone here. This latest crisis, in a lot of ways, represents a societal problem. Our society wanted more—call it immediate gratification or even greed. I discuss this issue in my new book, *Enough: True Measures of Money, Business, and Life* (Bogle 2008b). We don't want to save money to buy a car or a washing machine or whatever it might be; we want to buy it now and defer the interest for a year and enjoy it while it seems to cost nothing. We've become a "now" society, and that has contributed a lot to the speculative financial binge that lies at the core of this crisis.

After Wall Street's public apology, I think they ought to embrace *wise* federal regulation. They ought to call for it. The surviving firms should accept the limitations that I have talked about on their balance sheets and improve transparency, market prices, and trading with derivatives—those kinds of things. Let the sunlight of full disclosure shine on every single thing they do in futures and options and the myriad other things that we aren't yet tracking. Embrace federal regulation. It may be hard to do, but sometimes, you have to swallow a little pride.

Next, I think Wall Street's business model is broken. To rebuild public confidence, we must fix the Wall Street business model. Any system whose revenue depends on persuading investors to trade actively is, by definition, going to be focused on short-term speculation. What we want to do is build a model that is focused on long-term investment; that is the winning strategy. Short-term speculation is, by mathematical definition, a losing strategy. So, we should build a model based on a winning strategy whereby incentives are not based on trading volume but on personal financial service, asset allocation, broad diversification, and control of the risks and the costs.

We have to fix the mutual fund business model, too. Mutual fund managers are an integral part of Wall Street. Turnover among active funds is about 80 percent a year—that level of turnover doesn't have anything to do with long-term investing. When I got started in this business, the turnover was around 16 percent a year—year after year after year—which represents a six-year holding period. Now that turnover is 80 percent and many funds are over 100 percent, the holding period is about 15 months. So, we've had a "rent-a-stock" mentality, and if you rent stocks rather than own them, you abdicate your responsibility for corporate governance. The mutual fund business model must be fixed; it needs less focus on marketing and more focus on management and fiduciary duty.

Next, I believe we have to enact and enforce a federal standard of fiduciary duty. As I mentioned earlier, money manager/agents have put their own interests ahead of the interests of their principals—their pension beneficiaries and fund shareholders. But they're duty-bound to serve them, so we have to supplement this sort of flaccid enforcement of fiduciary duty by federal and state agencies with a national standard with powerful teeth in it.

Finally, I think we should consider a tax on speculative trading across the board. Most of the portfolios managed by financial institutions are represented by tax-deferred pension and thrift plan assets. All of this trading activity is constrained only by commission and transaction costs, which have decreased on a per unit basis but soared on a total basis. So, we need to add the frictional cost of a tax on very short-term gains. We should be thinking about a tax on short-term gains by all investment accounts, whether they are tax deferred or not, and then, we could get investment rather than speculation front and center, where it deserves to be. A lot of how we respond to this crisis depends on how serious the crisis is. I think it is a very serious crisis, and the seriousness means we have to demand new measures that are stronger than we might otherwise have thought about.

**Sullivan:** Is a global recession the most likely outcome at this juncture?

**Bogle:** I believe we're in a global recession right now. We have this odd standard for defining a recession as two consecutive quarters of a decline in real GDP. A recession, in my view, is a general period of very slow growth or even negative growth, undefined in terms of time. We have one now in the United States, and it is certainly spreading around the globe.

I think the U.S. economy is going to prove to be very resilient, more resilient than most people believe, and so I'm hopeful. It will take time to get through it, though. This is a very serious problem, and if I had to guess, I'd say it will take somewhere between one and two years before the economy stops its decline or very slow growth and moves back into a phase of stronger growth. I want to make the very important distinction that the action of the stock market will be quite different from the way the economy responds to the crisis. That is, in financial markets, black swans are somewhat common, occurring with reasonable periodicity when a huge element of speculation exists. But black swans rarely occur in the real economy—in GDP, for example. Yes, we had one in 1929–1933, and that was a pretty rare one. We've had recessions, of course, but the black swan is usually a market factor rather than an economic factor.

**Sullivan:** The Treasury has sought out some asset management firms to help guide the rescue package. Do you believe a conflict of interest exists with asset management firms supporting the Treasury's bailout rescue package?

**Bogle:** First of all, I think this represents a very serious problem. I'm not sure what the available solutions are, because people on Wall Street have a tremendous amount of knowledge about the system and expertise about the various kinds of financial instruments being used. Some brilliant people work on Wall Street. I think we now realize, however, that not everything can be quantified. In my new book (Bogle 2008b), I cite a wonderful quote from a sign in Albert Einstein's office that said, "Not everything that counts can be counted and not everything that can be counted counts." We have people who are very good at quantities but maybe not so good at judgment. The other problem is—and I think it has been quite apparent—that investment bankers are going to come to these problems with the perspective of an investment banker. What else is new? You may be able to take the child out of the investment banker, but you can't take the investment banker out of the child. For that reason, I think the original plan proposed by the Treasury was remarkably efficient in demanding something in return from the banks—to have the government take a stake in equity capital. The reason I like that plan is that it lets the banks focus on the problems themselves. We have investors who are trying to make money off of today's troubles—and that, as perverse as it may sound, is a good thing, and eventually, these markets will unfreeze. We will have people trying to "steal" these low-rated collateralized debt obligations, and the banks will have to decide whether it is worth letting these people have them at a low price. We will have a kind of market that will emerge for these assets. The result will be much better without Wall Street people trying to put a value on something because the only value we can really establish in this life is the value a buyer is willing to pay in an open market. Mark-to-market is a stern taskmaster. It is not very popular among our bankers, and they want a lot of relief. They don't want to tell people the estimated market values of the instruments on their books. I don't blame them for not wanting to do that, because it has serious consequences in terms of debt covenants, for example. But sooner or later, any asset is only worth what somebody else will pay for it. We should face up to that fact.

**Sullivan:** So, you are a proponent of mark-to-market accounting?

**Bogle:** Yes, I am. I understand the risks, and I understand why people don't like it, but you just come down to that old sentiment: What are you going to believe—me or what you can clearly see with your own eyes? I'm in the latter group.

**Sullivan:** How have investor behavior and psychology played into the current market environment, and what can we do as investors to avoid these cognitive lapses in judgment from now on?

**Bogle:** That is a great question, and it is not so easy to answer, because when you think about it, the net impact of these behavioral aberrations is zero. That is to say, during the late 1990s, investments were flowing into mutual funds focused on technology and the internet, which was really stupid because people were looking backward. They were dreaming about the "new economy" and all that wealth that might be created. But someone was selling those securities to those investors, so if the investors were dumb—behaviorally deficient, behaviorally handicapped, whatever phrase one wants to use—to do that, other investors were behaving rationally or intelligently in selling those securities. In the case of that particular boom, the sellers were often internet entrepreneurs or executives of internet companies. The new issues were very large, and they were sold heavily in the market to mutual fund investors.

In addition, executives of "old economy" companies were also selling the stock they acquired through options. The notion that stock options tie the interests of management to the interests of longterm shareholders is simply not true. The record is very clear: The day the options vest is the day that most executives get rid of those shares. We have this perverse situation: While the executives are selling these shares, the companies are buying their shares back to avoid dilution. This was a very common practice in the established markets-e.g., the NYSE—where executives of blue-chip corporations frequently did exactly that. The "old economy" companies were buying back the shares to avoid dilution from the issuance of shares to their executives. So, the behavioral side of markets is a very interesting subject academically because investors do make terrible behavioral mistakes. But for every mistake that I make, you, on the other side of the trade, have done something quite brilliant.

**Sullivan:** Do you have any final thoughts? **Bogle:** We all talk about behavioral issues. For example, when the markets are going up, investors seem to think they will go up forever. By the same token but equally important, when markets are going down, people seem to think they will continue going down forever. It is a sort of mass psychology that extrapolates today's trends into the future. At some point, those trends break, so I think we should be looking at the optimistic side of things today. For example, according to the stock market, the value of U.S. business has dropped from about \$18 trillion in October 2007 to about \$9 trillion in October 2008, which is a 50 percent decline—a huge drop. Does anyone really believe that the value of U.S. business has dropped by \$9 trillion over the past year? I don't believe it has dropped by \$9 trillion. I think that in the present recession, the stock market has overdone the decline in corporate value, which will ultimately reassert itself.

I mentioned bond returns earlier and how they are relatively easy to forecast. I have been a great believer in talking about the likelihood of very subdued returns on stocks following the excessive levels of the past era simply because the sources of the stock market's returns suggested they would produce modest returns compared with past levels. But with the recent sharp decline in stock prices, the dividend yield rose to about 3.5 percent. We haven't had a 3.5 percent yield in the stock market since the early 1990s. It was only 1 percent at the high in 2000, so the yield has more than tripled since then and will now be a significant contributor to future investment returns on stocks. From these rather depressed earnings levels, I think it would

be reasonable to expect earnings to grow not at the traditional rate of 5 percent (the rate of our economy) but maybe at a rate of 7 percent for the coming decade. So, a 3.5 percent dividend yield and perhaps 7 percent earnings growth would combine to produce a 10.5 percent future investment return on stocks. The dynamics have changed, and the sources of return have increased in direct proportion to the market's decline. So, I think we can look a little bit more optimistically to the future. These are the probabilities as I see them.

I want to conclude with a little caution about probabilities by citing one of my favorite stories, told by Peter Bernstein, about Pascal's wager on whether God does or does not exist. One option is to bet that God doesn't exist and live a kind of hellraising life. When you die, you find that God does exist, and there you are in hell for eternity. Not a good outcome. And if you bet that God does exist, you live a God-fearing life, raise a family, and do the right things for your community. And if God doesn't exist? Well, so what? It doesn't really matter to you. You've made a contribution to the world. So, what Pascal is telling us is that it is not just a question of probabilities—does God exist or not?—but of the consequences of that decision if you are wrong. So, I'd say that in the current financial market, the probabilities are favorable. But if the consequences of having bad results are dire for you, you had better be very careful of these markets. For most of us, I think, with a good asset allocation—very diversified, very low cost—this is not a time to flee the stock market or, for that matter, the bond market.

This article qualifies for 0.5 CE credit.

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