The Great Debate

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PAULA HOGAN: Welcome to The Great Debate. My name is Paula Hogan and I'm going to be moderating the debate today. And we're honored to have two of the finest financial economists in the country today. Professor Jeremy Siegel joins us from the Wharton School at the University of Pennsylvania, and Professor Zvi Bodie joins us from the Boston University School of Management.

Both professors are highly respected teachers, they are also widely published in peer reviewed academic journals, and they are each also widely known in the financial advisory community because they're active on the lecture circuit and they also write books. Professor Siegel's book, *Stocks for the Long Run*, is now in its third edition. Professor Bodie's book on investments is the standard textbook in the credentialing program for certified financial planners and also for actuaries. He also has recently published a book mainly for the retail press just recently called, *Worry-Free Investing*.

As the audience you're for the most part highly experienced advisors accustomed to the high standards of NAPFA educational conferences, and also you have a basic familiarity with the main message of each of these professors. For example, you were probably expecting that we'd start off today with Professor Siegel making a very learned and refreshingly clear explanation of his point of view that stocks are the most powerful way to protect and accumulate wealth over the long run. And you're probably expecting that Professor Bodie will then offer a compelling counterpoint to the traditional investment paradigm by showing that, in fact, stocks are very risky even in the long run.

And then you're probably expecting that there'll be a PowerPoint lecture and format where each professor will show what the implications are for their respective points of view.

And if that's how today's presentation rolled out we would all go home knowing a little bit more about the historical returns in the markets and a little bit more about what financial economists are thinking today. But let's be honest—we'll probably also still go home wondering what are we going to do differently when we go back to the office on Monday morning?

So we're going to try something a little bit different today. Instead of the normal PowerPoint lecture format, as moderator I'm going to pose a series of questions, first to one professor and then the other, which are the questions that we deal with every day as advisors when we work with real clients who have real money and their real lifetime hopes and dreams on the line and entrusted to us.

The format, as I said, will be a series of questions. To each question there'll be a three minute response followed by a two minute rebuttal.

As some of you may be aware, both Professor Siegel and Professor Bodie earned their Ph.D. in economics at MIT with a mentor of Paul Samuelson, the economist and also Nobel Laureate. And in order to prepare for this debate I called Professor Samuelson—he's in retirement now in Florida—to see if he wanted to add his two cents to the debate, because after all, these are his students. When he got on the phone the first thing he did is claim both of these men as his students.

[LAUGHTER]

He then informed me that this is actually a rerun of a very famous debate that was held five or six years ago between Professor Siegel and also Professor Bodie. Except that that debate was moderated by Paul Samuelson. He also said at that debate they did a poll before the debate and after to see if they had changed any minds. And he said at that debate the poll before the presentation was something like 90 to 89, and that the poll after the debate was something like 89 to 90. And then he laughed and said, "We still don't know whether we changed no one's minds or if we changed everyone's minds."

[LAUGHTER]

But we're not going to take a poll today. Instead, we're going to stay very focused on a goal appropriate for the advisory community. And here's the goal. We want everyone in the room to walk out today with a much better answer in their own minds to three questions: What are the risks that our clients face as they prepare for long term financial goals? What tools are available to address these risks? And, as advisors, what is our role in helping clients manage those risks? And because this is a NAPFA conference, and we tend to be more informal than other conferences, and with both professors' permission we're going to be using first names. So, I present Jeremy Siegel and also Zvi Bodie, and here we go.

First question to Jeremy. In multiple peer reviewed journals and in a book recently released to the retail press Zvi Bodie makes the argument that stocks are risky, even in the long run. Do you agree with that point of view? Why or why not?

JEREMY SIEGEL: Thank you, Paula, for giving me an opportunity to respond. For ten years since the first edition of *Stocks for the Long Run* has come out, I feel there's been a big misunderstanding by Zvi of some of my research. So…

[SOME LAUGHTER]

Let me show you the graph that is in my book, *Stocks for the Long Run*, that I think is so critical to that. We have it on my right, on your left. It is the standard deviation of stocks, bonds, and treasury bills after inflation, measured over the longest period we have ever done research on. 200 years. That's the one year standard deviations, those are the two year average standard deviations, five, ten, 20, and 30. Now, many of you who have gone to my presentations have probably seen that slide before.

Now, one thing I should make very clear, I never said that that means stocks are safer in the long run. This is the standard deviation of average annual returns. We know the standard deviation of the average goes down when you have more periods. Even if it's random walk, it goes down. What I pointed out here is that the standard deviation for stocks goes down twice as much—twice as fast as random walk theory would predict. In other words, they are relatively safer in the long run than random walk theory would predict.

Doesn't mean they're safe. The whole point is that they are relatively safer. And to that point, you know, I am not only as firm as I was ten years ago, I'm even more convinced that this is absolutely the case.

And does this change your investment strategy? In other words, does the fact that equity returns display long term mean reversion change your equity strategy? The answer is definitely yes. Change your allocation strategy? The answer is definitely yes.

I think that Zvi sometimes said or thought I heard him say, well, that stocks are safer in the long run. Well, they're not safer in the long run—that's definitely not true. But are they relatively safer? And that's the key—and the answer is yes.

PAULA HOGAN: Zvi, two minute rebuttal.

ZVI BODIE: Well, I think, Jeremy, I did understand what you were trying to…

[LAUGHTER]

But, unfortunately, I think that a lot of people who use your name in vain do not understand. And I think it has become part of the conventional wisdom that if you hold stocks long enough they are bound to outperform all other asset classes. And not only do I think this, I can prove it if I had more than two minutes, by simply citing from virtually every website that provides financial education. In fact, I even have one here on my computer in case somebody challenges me.

And that view is reflected in how advice engines dispense advice. The only thing they ask you in order to determine how much you should invest in equities is the length of your time horizon. And if you say a long time, then they recommend a high allocation to equities, regardless of anything else you say. And I've tested this out on some of these advice engines by saying that I am absolutely not willing to take any risk. You know, they put you through a series of questions to determine your risk tolerance. And then I always answer, my planning horizon is more than ten years. And the advice I always get is a significant fraction in equities. To be continued later.

[LAUGHTER]

PAULA HOGAN: Zvi, Jeremy Siegel is well known in academic circles and in the financial advisory community for the idea that stocks are the most effective way to accumulate wealth for the long term. Do you agree with that point of view? Why, or why not?

ZVI BODIE: Well, I think the question is not properly posed. I think in investments the real issue is the tradeoff between risk and reward. And it's not a question of the most effective way to accumulate—that kind of begs the question.

People who are risk averse should not be exposed to the risk of equities. And I can give you lots of examples. Me, for example. At my age, I don't want to take any risk. I got out of the stock market, I am completely invested in long term inflation protected bonds and other such instruments. The only equity exposure that I have is through principal protected notes, MITTS and other type securities, which give me upside but no downside. They guarantee my principal.

Now, I think that's perfectly rational, and I can actually derive it from a theoretical model of optimal life cycle portfolio selection that I studied. You know, Paul Samuelson was the original theorist who developed these models, and the fundamental thing you have to understand in these models is that having a long time horizon and being risk averse are two completely different things. You can be risk averse and have a short horizon or a long time horizon, and you can be risk tolerant and have either of those time horizons. And they imply very different investment strategies.

The popular literature has basically said if you have a long time horizon you're tolerant towards risk. That's the fundamental fallacy, which I'm sure Jeremy does not subscribe to. I think.

[LAUGHTER]

PAULA HOGAN: Jeremy, two minute rebuttal.

JEREMY SIEGEL: Well, first of all, I would ask Zvi if he sold his TIPS a month ago when they were at all time highs and yielding about 1.3 percent on the ten year. I don't think we'll ever see it that low again. But we'll talk about that later. You know, I've been a fan of TIPS—I've written columns about TIPS. I certainly prefer those to the standard nominal bond, especially for people planning for retirement.
The problem is is their yields are pitifully low at the present time. And they've come back a little bit just in the last couple of weeks, but just a month ago you could lock yourself up and you'd get a taxable yield of 1.3 percent after inflation. And we'll talk about how good that is, I think, in the next question.

But I do want to—I agree with what Zvi said. That if you have a long horizon it doesn't necessarily mean you're not risk averse. That's clearly true. But I think what is also true is that whatever you risk aversion under most cases—and you can never make a generality over all cases—but under most cases that does mean the longer horizon you will relatively invest more in equities than you would if you had a short horizon. And the support of that is this graph that I'm presenting here. That the relative risk of stocks falls relative to that of bonds and faster than what we would call random walk theory. That changes your long run strategy as opposed to your short run strategy.

PAULA HOGAN: Jeremy, what do you think of the current long term mean return and standard deviation for stocks, bonds, and treasury bills? And what are the investment implications of your estimates?

JEREMY SIEGEL: Okay, that's a really key question. What can we expect now long run? I'm in the camp—I heard Burton Malkiel was here yesterday and talked about lower equity premiums, talked about lower returns. I've been saying that for a long time. Let me just tell you what the long term data says. The long term data says that over 200 years the average real return on stocks has been 6.8 percent a year. That's the long run over 200 years. The long run on bonds, by the way, has been 3-1/2 long term. Not in this century, not in the Ibbotson data, but over a longer period of time.

All right, now, where do I think we stand today? I think the long run average real return short term—short term, like on CDs or treasury bills or Fed Funds is 2 percent, 2 percent over inflation. I think when you get to ten-year bonds I would say the long run should be probably 3 to 3-1/2. You can get an average term premium to 100 to 150 basis points. All right, now, the big important question: What do I think forward looking for equities?

Forward looking for equities I don't think we're going to get that 6.8 percent real long run. In fact, what I'm generally lecturing on is a 5-6 percent real return long run on equities. And why is the real return going to be going to be lower than what it has been historically? Well, because the valuations are higher, as they should be. We can talk more about that later, but we are in a world that should be of higher valuations in stock than the 15 historical that we all hear is the long run average PE ratio.

PAULA HOGAN: Zvi, two minute rebuttal.

ZVI BODIE: Yes. My attitude towards investing in stocks is not really all that dependent on what you think the risk premium is. Because the way I think about investing is I first of all lock in the amount of real inflation-protected income that I think I need for my important life goals. And I do that using inflation-protected bonds, both Series I Savings Bonds and TIPS. By the way, Series I Savings Bonds everybody ought to buy. It's a fantastic deal. You're limited to $30 thousand worth a year per person, but there's no downside risk. These are bonds that the Treasury redeems at accrued value. Unlike TIPS, where there is downside risk. So, if interest rates were to go up, real rates on TIPS, there would be some short term losses on TIPS. But not Series I Savings Bonds.

And then I say, okay, how much equity exposure do I want? And I buy my equity exposure through the long term LEAPS market—call options on the S&P 500—where the only thing that matters really is the price of the option. It matters, of course, what I think the expected return is, but after all, if a respected scholar like Jeremy Siegel can say he thinks the expected real return is 5 percent, the editor of the *Financial Analyst Journal*, Rob Arnott swears that it's zero right now. And one of Jeremy's best friends, Bob Schiller, what is Bob saying it is these days? One percent or zero? So who am I to render a judgment as to which of these people is right?

PAULA HOGAN: Zvi, how do we insure with reasonable probability that our clients will not outlive their wealth?

ZVI BODIE: Well, I am a very big fan of life annuities. SPIAs, Single Premium Immediate Annuities. And in particular in the last couple of years there are a few that came out that are inflation protected. Most recently the Principal Insurance Company has come out with an inflation protected life annuity, and I recommend them to my mother and other relatives who are even older than I am. And it puts my mind at ease and it puts their mind at ease, because they're guaranteed not to outlive their income stream, and not to have it eroded by inflation. So, that's my answer to that.
Now, the big problem that I see in this market is the heavy load fees on annuities. And in recent years I have gotten involved in a partnership with several other professor types to try to create more competition in this market and to use the Internet as a mechanism for getting insurance companies to bid against each other on life annuities. I think this is a market that is going to develop very, very rapidly during the next five to ten years as the baby boom generation, my generation basically, reaches retirement, has all this money in 401K plans, and in search for greater security wants to make sure that they can't outlive it. So, that's my answer to the question.

PAULA HOGAN: Jeremy, two minute rebuttal.

JEREMY SIEGEL: First, let me just say I definitely agree with Zvi. I think indexed life annuities is a very important instrument. And we're probably going to talk a little bit more about that later. I do want to respond to what Zvi said about the bears on Wall Street. Bob Arnot maybe many of you saw in the April 19th issue of *Forbes* magazine. Actually, it was a cover story—a debate with Rob Arnott about that, where I disagree. I disagree very strongly with that. I think he's misusing historical data. He's also misinterpreting the problems we have with earnings today, which there are some, but he is making it much worse than it is. Our arguments are spelled out there. So if you have a chance, that's the April 19th issue.

My good friend Bob Schiller has been bearish for ten years. I debated him on October 10th in New York City before the Forbes CEO Forum, in that morning. That was the absolute low of the stock market, where the S&P was at 770. I said, this is the opportunity to buy. He told everyone no, the market's still 25 percent overvalued, sell everything. So, he just has a different model than I do. His model always says sell.
[LAUGHTER]

Let me say that if Zvi just listens to Rob Arnott and Bob Schiller, he also should be pricking his ear at all those optimists that are talking about 10 percent, 12 percent equity returns. So, really, if you want a balance—you know, I'm in the middle. I'm the reasonable middle here.
[LAUGHTER]
Not somebody that really is out on a limb.

PAULA HOGAN: Jeremy, many advisors are worried that if stocks are not going to have as high a return as they did during the bull market that we need to find other—that is alternative investments to add to client portfolios. Do you think alternative investments are becoming more appropriate? And, if so, which alternative investments are worth considering?

JEREMY SIEGEL: Now, this is also a very important question. We have stocks, we have bonds—and, by the way, particularly when we have stocks we have international, which has got to be included in your universe of assets. I'm not as much of a fan of foreign bonds as a diversification tool. But getting back to the United States, real estate—is that an "alternative asset?" I like REITs, I hold REITS. Real estate is huge. Of course people have their own homes in most cases, and that's an important consideration. I think REITs are going to continue, we're going to see more equitization of REITs over time, we're going to see a greater fraction. There's huge potential in that market. I think that that is a good distinct asset class. And now with it having come down a good 15 percent, I mean as it was driven up by just momentum traders and then finally they jumped off—you know, it certainly offers reasonable returns at the present time.

I think what a lot of advisors are now wondering about, well, what about the real alternatives? These commodity funds or—of course, hedge funds, what are they in and all the rest? And those get me more concerned. It's getting very crowded out there. How many nickels are there to pick out of these inefficiencies? There's a lot of people looking for them and I'm concerned about that long run as generating reasonable returns. I think one thing you should think of—and I'll leave it at that is—you know, real estate is a valid asset class, because actually the total amount of real estate if you include owner occupied is on the magnitude of stocks. We've got about 15 trillion of stocks, about 15 trillion of real estate. We've got about 10-15 trillion of bonds. So you have a triumvirate there.

When you start going elsewhere, well, what's the underlying? And then you can be in a bubble. Because if everyone's going after an asset class that has a tiny underlying asset base, that could be big trouble.

PAULA HOGAN: Zvi, two minute rebuttal.

ZVI BODIE: Well, this isn't really a rebuttal because I tend to agree with what Jeremy said for the most part. But when I hear the term alternative investments, I think of something else entirely. And that is I think of allowing people—particularly people at the retail level who aren't very sophisticated in investment analysis, giving them their exposure to risk in a very different form. And you heard me talk earlier about how I'm not all that concerned about what the expected return is on the stock market, because I'm buying only the upside when I buy call options.
It's a little bit the way many people will play the lottery. How many people do you know calculate what the expected rate of return on a lottery ticket is? You're paying a fixed, limited amount of money for upside. And I think that's really the way most retail investors should be exposed to the stock market. They should be protected on the downside because they haven't got a clue how to analyze risk. Many of the professionals haven't got a clue how to analyze risk. So, certainly the retail customer doesn't. And they should be given their choice as to how they want to get their upside exposure.

And that is possible today. The last 30 years, which is when I've been active in the field of finance, have seen a complete revolution in the availability of all sorts of new financial instruments. For the most part they are used by institutions. But the time has come, I think, to create retail products that allow people to choose how much protection they want on the downside and the form in which they want to get their upside exposure.

PAULA HOGAN: Zvi, as advisors we worry a lot about the optimal way to draw cash from a portfolio for lifetime living expenses. To do this many advisors use some variation of the following approach: In the first year of retirement withdraw 4 percent of the portfolio for living expenses, and then in each subsequent year increase that dollar withdrawal by the rate of inflation, and all the while maintain a stock bond allocation of about 50/50. How would you critique this paradigm?

ZVI BODIE: Well, my main critique of it is that this is not a one-size-fits-all situation. I think—particularly thinking about myself, I'm just about turning 61. So, I see retirement looming on the horizon. I have not yet retired. But I know how unique my own situation is. And I know how unique the situation of my friends is. So, I think what we need is a way, an efficient way, a relatively inexpensive way, of customizing solutions for different people the same way we customize automobiles. No one would think of having one automobile for everybody. You have standard configurations which are tailored to the needs of different people in different situations. And then on top of that you allow people to choose options if they want.
And I think, for example, my situation is unique in that I can probably tolerate more risk in retirement because of my profession. I'm a consultant, I'm a speaker, I write books. If I need more income I can earn more income. Even in retirement. That makes me a lot more tolerant to risk.

PAULA HOGAN: Jeremy, two minute rebuttal.

JEREMY SIEGEL: You know, I find it a little strange—Zvi says he's giving conservative investment advice, and then advising all your clients to buy call options.
[LAUGHTER]
I think that's a horrible idea. Especially with volatility crashing down, I'm sure that they haven't done well at all. I mean one of the fundamentals that we learn about return is you're not going to get a higher return unless you take some risk. And I'm sure Zvi agrees with that. And I'm puzzled to say—he says, I don't care what the equity risk premium is. I think that's extremely important. I mean, you know, one percent, 1-1/2, 2 percent, yeah, I would be wary of stocks. And I would probably be shifting into TIPS as a safe asset. At 3 percent I'm much more comfortable.

I remember a question like that once actually being posed to a group of advisors. And they said, how much would you be in stocks if the expected return were three percent higher? Most people raised their hand. How many two higher? Oh, a lot of people put down their hands. So, that's a critical variable. I'm very puzzled by saying it doesn't matter in terms of investment strategy.

PAULA HOGAN: Jeremy, how do we know if your clients are saving enough?

JEREMY SIEGEL: Well, what you've got to do is sit down and say, well, if this is how much you're saving, this is what you're going to have. And, by the way, that's another very important thing where you have to have some rate of return. And in a way—I think it's true, if you say, if you're going to save this much, you're going to have this much at retirement, and then it's appropriate to convert it into an indexed annuity. Here's where TIPS—and I really do admire Zvi going into this market and making it better. I think that's fantastic. I think that that's really critical that we get competitive pricing on indexed annuities. But you can tell your clients, okay, at this rate of saving, this is how much you're going to have. And, by the way, you always have to tell them—which I find when I talk to some people they forget—oh, yeah, it's in my 401K. Well, I'll have to pay income tax on this. So it's after income tax, and then you have to take care of inflation, and then you have to think about what kind of maybe indexed annuity you can get out of it, and then say, can you live on this? Maybe we can do a little bit better now by putting some of it in stocks, but, you know, basically you get a ballpark idea where you stand.

PAULA HOGAN: Zvi, two minute rebuttal.

ZVI BODIE: Well, two important points, at least to my mind, that I would like to make. One of them is that it is important, I think, in deciding how much to save to use a realistic real rate of return assumption that is low. And I think that what tends to happen is—I can't talk about what you folks do when you're working with clients, but I know the online advice engines that I play around with typically advise you, if you can't afford to save as much as you need to, or it seems like it's too much, just jack up the assumed interest rate.

[LAUGHTER]

And that's what I call—the technical term for that is wishful thinking. Of course, if you assume a higher interest rate then it's riskier. And here's the other important piece, which is—you make this point, you say, but wait a second, then it's riskier. And then the answer comes back, well, you'll have to save more because you need a buffer against uncertainty. There's something crazy about all that, okay?

The approach that I advocate in my book and elsewhere, *Worry-Free Investing*, is to start out by saying, look, start from your goals. What are the things you absolutely want to have minimum amounts of, whether it's retirement, your kids' education? Invest very conservatively to achieve those minimum goals. And then if you can save more than that, put it at risk to get higher returns.

PAULA HOGAN: Zvi, there are many articles appearing in our professional journals that imply a shift in focus from asset management to liability management. Why are these articles appearing now? Are they relevant to us? And what are the implications for us as advisors?

ZVI BODIE: Well, I think they're long overdue, actually. Because the conventional wisdom of financial planning and investing is you start out by specifying what your goals are. And everything should be driven by your goals. And we all pay lip service to that. But then when you look at the actual investment advice you get, it turns out to be totally independent of what your goals are. It only depends on what your time horizon is. Now, there's something fishy about that, isn't there?

If you're investing for a specific goal, that creates a liability. That's the way you should think about it. Just like if you belong to a pension plan and you're accruing benefits, the pension sponsor has a liability. And the safe investment strategy is to hedge that liability, as more and more pension sponsors are doing.

Well, why doesn't that apply to individuals as well? If you want to put your kid through college you've got a liability of four years college education out there. You should be investing to hedge that liability, I think.

So, to me the question is, why haven't we started talking about this a lot earlier? And I think the answer to that is, in the raging bull market of the 80's and the 90's, equities was the magic cure for everything. You didn't really have to think hard.

PAULA HOGAN: Jeremy, two minute rebuttal.

JEREMY SIEGEL: I agree—liability management, if you want to call it that, it's really been brought home, I think, with this tremendous fall in interest rates, both real and nominal interest rates—that a given amount of wealth just won't go as far. And we are too fixated with just the fluctuations in the value of our portfolio. And here I agree with Zvi—I mean we have to think what you really have if you're at retirement—and let's assume you don't have tons of money, so you're thinking of bequests and all sorts of other things that then have another dimension to them—but what you really have is an indexed annuity liability. Absolutely.

And you now have to make an investment strategy against that indexed annuity as a liability. You have to plan assets that will correlate well with that. Obviously, TIPS, bonds that are annuitized would correlate perfectly with that. That's another thing. And I agree that the idea of the risk-free rate of return as being the short term rate, either nominal or real, is not really realistic either when you're thinking in terms of shifts and opportunity sets over time.

So, yeah, I'm more attracted by that and I think that—in fact it was our good friend, Bob Merton, who introduced this years ago, but no one really picked up on it. It's very important to think in terms of that indexed annuity as being the liability against which you have to plan your asset allocation.

PAULA HOGAN: Jeremy, what are the investment implications of the baby boomers cresting into retirement over the next decade? And what, if anything, should be done about it?

JEREMY SIEGEL: This is important. You get predictions anywhere from it doesn't matter to there's going to be a huge crash coming up. I've looked at this issue quite a bit. And I've come to the conclusion that if you just looked at the developed world, the United States, Europe and Japan, that that age wave is very critical and is not a happy scenario for financial assets, stocks and bonds. Because that's what all the aging baby boomers will be selling. They're going to try to finance their retirement. The problem is there's not enough workers with enough income below to absorb all of those assets at the prices they hope that they could be absorbed. And that could have some serious consequences.

However, let me mention something else, that the more research I do, the more I am hopeful about that situation. When you look at the rest of the world, they do not have the aged demographic profile that we do in the United States, or even more so Japan and Europe. They have a very young profile, and they're growing very, very quickly. I built a computer model that looks into integrating the world demographically, and what kind of trade flows and productivity can come about, and I've come to the conclusion that if they can grow quickly—let's say, 6 percent per year—China's already above 8; India has reached 6; other countries are trying to get there—that that provides a tremendous wealth of buying power. Not only for our equities and our stocks, but also to produce the goods that we retirees need. And I think that that's going to be the best answer we really have to the age wave, is the development of these countries. And it's my belief that that's a very important policy—implications that we have to look at that we stay integrated as a world economy.

Their development is not just important for them, but it's going to be important for us, because we need their output—because we don't have enough workers.

We need their buying power. And, by the way, once you put that buying power into the model, you find out that that does the trick in terms of preventing a cascade of assets that will drown us all once the baby boomers do reach retirement.

PAULA HOGAN: Zvi, two minute rebuttal.

ZVI BODIE: I completely agree with Jeremy about this. And, in fact, I would take it one step further or just extend the argument a little bit more and say, I get very alarmed when I see all this backlash against so-called outsourcing to places like India. Because I agree with Jeremy—that's the solution to aging demographics, is to outsource jobs to other parts of the world. We are a capital rich nation, and we are going to be facing shortages of human capital in the future. And the best way, the most productive way, and mutually beneficial way of overcoming that problem is through increasing global integration. It's now possible through the Internet to do it quite efficiently. So that's one point.

The other point is that I think the financial markets are going to play an increasing role in the further integration of the global economy, and that's a good thing. I see the growth—and largely that's coming about through the growth in derivatives markets—particularly swap markets. I see a large number of what are called total return swaps, where pension funds in foreign countries can actually swap the return on their domestic stock market for the return on the U.S. stock market. And there's a netting that takes place so that there's a minimization of actual flows of capital. What's actually flowing is risks. And we're getting a much, much more efficient diversification of risks around the globe.

PAULA HOGAN: Zvi, is the risk of outliving one's wealth a risk that should be shared? Is this risk an investment issue or an insurance issue?

ZVI BODIE: Well, I actually don't see any dichotomy between insuring and investing. I think two different models have developed in this country, and I'm a believer that we should have a single model. After all, insurance is adjusting your exposure to risk. But what you're doing is, you've got some exposure and you want to reduce it. Investing is about adjusting your exposure to risk, and that is taking on some risk that you don't actually have in search of a higher return. It's all about risk management, it's all about using the tools of risk management to adjust the degree of exposure that you have to various market and other type of risks as an individual, so that you are made better off.

And in part that's through diversification. But for many people the most straightforward way of adjusting exposures is by buying insurance. And here I want to come back to something that Jeremy said earlier about call options. I actually view call options as a form of insurance. Because the comparison that you need to make is not are you investing the same amount of money in calls as you are in stocks? That obviously would increase your risk exposure. But compare the following two strategies: 100 percent of your money in stocks versus 90 percent of it in treasury bills or treasury bonds; and 10 percent in call options that give you more or less the same amount of upside exposure to the stock market as would 100 percent of your money in stocks.

PAULA HOGAN: Jeremy, two minute rebuttal.

JEREMY SIEGEL: Let me go back to—the question of indexed annuities we raised before is very important. The pooling ability to eliminate that risk of an uncertain lifetime. Again, I think that that's going to be a very important instrument. And, again, I want to say that I'm very pleased that Zvi is looking at that. Not only looking at that, but actually working on that in terms of actually getting it out there.

Again, in terms of calls. Obviously, there's always a way with puts and calls, you can rearrange and get the same as a stock. Let me also say that, you know, if you sit down with a client—and Zvi suggested this—and said, what is the absolute minimum that you could live on? That amount should probably go to an index annuity. And there I would agree—if you could actually determine or not. But, you know, it's the difference between what I'd like to live on and what is a minimum, because a lot of things can actually happen on that. And, again, it's my belief that that equity premium is important, and therefore in trying to—saying, all right, if you want to take a little more risk we can say that this is a more likely return and move along those margins.

PAULA HOGAN: Jeremy, this is a three-part question. What factors should we consider when determining the optimum equity exposure for our client? And what would make us change that decision? And do you consider a 60/40 portfolio as a reasonable normal allocation for the typical long term portfolio?

JEREMY SIEGEL: You know, that 60/40, where did that ever come from? It's sort of like we're all there, it seems reasonable. [CHUCKLES] It's really quite amazing. You know—and I think I remember, we were—in fact, it was last Friday we were on CNBC, weren't we Zvi? And you were asked that question, and you said you can't answer that question without knowing more about the client, you know, in terms of what he and she—what kind of risks they face, what other inheritances they have, what their sources of income are. I mean there's so many considerations.

But let me bring in one that I think—one that's a little bit important. John Campbell, professor at Harvard, very well respected. I respect him very, very much and all his research. And he said, Jeremy, the book, *Stocks for the Long Run* is great—you were the one who opened my eyes to mean reversion and all that. He said, however, you do know that if you strictly do that mean reversion it does mean that when equity prices get really high, relative to fundamentals, that means you're going to pare down the percentage that you keep in stocks. It's not going to be absolutely fixed. I said, yeah, I do actually recognize that. And, as many of you know, in March of 2000 I had a lead editorial in *The Wall Street Journal* saying, get out of tech stocks, they're just not priced at all relative to reality. I also said, by the way, the non-tech stocks look reasonable. They're not overpriced or underpriced.

Interestingly enough, had you just gone out—there were 78 tech stocks in the S&P 500 and 422 non-tech. If you would've held the 422 non-tech portfolio you'd be ahead today than you were in March of 2000. We had a bubble. You have to be cognizant—I'm not one of these people that say they're efficient all the time. Not that it's easy, of course, to determine where they are. I'm doing some research now that gives one some pointers on how to actually look at them. We actually have had two important bubbles in the post World War II period—one was a technology bubble in '99, the other was the oil bubble that hit us in '79. And if you actually look at sector charts, these really jump out at you and you could have made moves to avoid them.

So, one of the things is keep your eyes open. There's going to be sectors that are going to get overvalued. If you made nice gains in them, you know, shade down your proportions.

PAULA HOGAN: Zvi, two minute rebuttal.

ZVI BODIE: Again, not a rebuttal. I think that we have the wrong paradigm, basically. 60/40 is a description of inputs. That would be like saying from a different realm—you're preparing a meal, what should the proportions of flour and eggs be? Doesn't it depend what you're making?
[LAUGHTER]

I think you start from the goals. What is the investor trying to achieve? And then you tailor a portfolio to those goals. When I say a new paradigm, I mean we really have to start from a menu of features. And we see this happening in lots of different areas. I remember when I was a kid, stereos were the newest thing out. This goes back to the 50's. And it was all about components, right? Because it was something new. You went to a store and you thought in terms of inputs. Today, who thinks in terms of inputs? You listen to how it sounds. You care about the end product and you let the experts worry about how to produce it most efficiently.

The same thing happened with personal computers. I remember my first personal computer—I was so confused, because in the store you had to know what components you wanted. Well, that's a very primitive stage of development in an industry. You expect it to evolve to the point where the customer is choosing from features that he or she understands and wants.

So, the comparable thing, I think, in investments is to think in terms of downside protection, upside potential. It's a very different paradigm. It's not about 60/40 stocks/bonds or any other proportion.

PAULA HOGAN: Zvi, how important is it for advisors to incorporate an opinion about the relative value of the dollar as we help clients prepare for their long term financial goals?

ZVI BODIE: In this country? Well, I don't think it's important at all unless your client has family abroad and it's a concern. I think the only concern is what is the value of the dollar relative to the consumer price index—the purchasing power of the dollar. But I don't see why any financial planner would in the normal course of advising have to worry about the exchange rate of the dollar relative to other currencies.

PAULA HOGAN: Jeremy?

JEREMY SIEGEL: I think it has some importance if you think about global diversification. And maybe that's how the question should be phrased in the sense that should you worry about the dollar being too high or too low, or whatever, when you're trying to put forward a plan for your client in terms of the proportion of stocks internationally. That's, by the way, another real tough question. When I first started *Stocks for the Long Run* I talked about maybe a quarter of them—a quarter stock should be international. I've now moved that up to maybe a third. Again, widely diversified. And don't just crowd into India and China, because even though they are the fastest growing, it looks like there's some bubbles in some of the prices in China. But emerging markets and international are important.

Now, as far as the dollar is concerned—you know, purchasing power parity in the long run kind of takes care of it and you don't have to worry. If the dollar is extremely high, you know, as far as that's concerned, then you might get some return going into the foreign. But I think that that's too short term oriented. I think you've got to take a very long term perspective, and not worry so much about the dollar, but realize that over two-thirds of the world's capital is really outside the United States. And that proportion is going to be increasing in the long run.

PAULA HOGAN: We have one more final question before we wrap up and go into a Q&A question. Starting with Jeremy—this will be the same question for both professors. In the next five minutes please summarize your key ideas about how clients can best prepare for long term financial goals. And, secondly, how we as advisors should be defining and carrying out our jobs.

JEREMY SIEGEL: I think both those questions almost can be rolled into one. I think we have to get our clients to be very realistic about what the long term real returns are going to be. And, Zvi, maybe we'd better do that for pension funds, too. [CHUCKLES] Which sometimes put unrealistic assumptions on what it is. I say 5-6 percent real for stocks long run. Real. Now, you add inflation onto that, you know, if you want to add 3 percent that's 8-9; 2 percent, that's 7-8. But we are in the single digits. Now, when you go to bonds you're no better off. As I say, TIPS are around 2 percent, just having come up from even well below that. So, if you want that safety you're dealing with those low returns. That's really important. It's discouraging to say the least, because that's a measure of our liability.

I also think—and here is where I agree, again, with Zvi—think in terms of what kind of index liability your client has. This is how much money you have, all right, what kind of stream of purchasing power? And you can calculate that out now. And, hopefully, there will be—you can certainly by laddered TIPS, although they're not as good as what Zvi is talking about, an actual indexed annuity that's competitive out there—I think is something that's very important. But, nonetheless, you can do the calculations yourself and say, this is how much you should have. I think you should think of equity risk premium in the area of 3 percent. Maybe now 3-4 because TIPS are relatively low now and probably will come up in yield. That's sort of what you're thinking. No more 6, 7, 8 or whatever textbooks say equity premiums actually are.

And then, also—and, again, this sort of repeats what I had said before—we have to have a global perspective. More and more capital is going to be produced and generated outside the United States. We can partially capture that by going into global firms that serve the international community; and partially, of course, with indigenous firms that arise within these countries. Again, I particularly favor indexed approach. I'm not thoroughly convinced—you know, a lot of people say indexing is fine for S&P because they're so well looked at. Once you get to international issues and all the rest, shouldn't you really have an active advisor? There's evidence on both sides of that about whether that is actually better or not.

You know, the EAFE, the EAFE exchange traded fund, ETF, very active, very liquid, is just as good a vehicle to get that international exposure. So we have to think about international orientation as well.

PAULA HOGAN: Zvi?

ZVI BODIE: Yeah, I would agree with that, and I would extend it by making a prediction that in the next decade, we are going to see the same kind of transition that we've seen with stereos, with computers. There are going to be more end-user oriented, consumer-oriented investment products. A whole new generation of retail products that the financial services industry is going to be producing. I'm absolutely confident of that. And we're giving one example of that, being the immediate need, inflation-indexed life annuities. But the next step after that is various types of guaranteed products that have equity kickers. So that an investor can participate in the upside in a very controlled way—in a way that the investor and the investor's advisor can easily understand. Much as you would go to a stereo today and adjust the knobs—you wouldn't get behind the stereo and start pulling out components and switching them.

I think the role of financial advisors is going to become explaining these products to people. Not explaining asset allocation mixes, but explaining how to use these new products. Because as simple as they may be, as user friendly as they may be, people are going to need it explained to them. Just like we need to have our VCR explained to us. No matter how user friendly they make it, I always seem to see that green flashing light. So, imagine if I had to put it together from components—I can't even adjust the knobs. I do think that's what the role of financial advisors is going to be increasingly over the next decade.

PAULA HOGAN: Zvi Bodie and Jeremy Siegel, thank you very much.

[APPLAUSE]

We saved time for some Q&A. There's two microphones. I assume we'll just alternate from side to side. Go ahead.

MAN: There's been a lot of discussion of real returns, after-inflation returns. And I've read a lot about debates of measuring inflation, whether it's the CPI or whatever Greenspan uses—personal consumption deflator or whatever. And I think it may have been in that article that you guys were debating in *Forbes*. I can't recall—but there was a good discussion of the CPI, and that almost 42 percent of it is represented by real estate inflation where they imply a rate of inflation due to rental income on homes and stuff. Can you speak extensively to what's the best measure of inflation? And also, the TIPS that are indexed to the CPI—not to the personal consumption deflator.
I read that—I think it was Greenspan in his testimony said that the spread no longer represents entirely inflation, because either they've become more liquid or too illiquid. Can you speak to the measurement of inflation and how it affects TIPS?

JEREMY SIEGEL: I could start that.

PAULA HOGAN: Repeat the question.

JEREMY SIEGEL: Well, first of all, the question is, I guess, is housing correct in terms of—it's a big percent and it only shows 2 percent. And then there's the question of, I guess, about TIPS and using the CPI. Let me say the following. Yes, housing does use what's called rental equivalent. They do not use house prices directly because houses are considered assets and assets do not belong in the consumer price index. As an economist, I agree with how the Bureau of Labor Statistics computes that as a rental equivalent. And that does show low inflation. And there's some that say interest rates go up, there'll be more pressure on rents, and that actually might start rising a little bit later. Also, if real rates go up, that also would… I think that that is correct. There have been adjustments made to the CPI after the Boskin Commission Reports that have lowered the CPI rate of growth about a half percentage point from what it had been in the 80's and early 90's. Most economists agree with those reductions.

I didn't quite understand the liquidity question. If anything, TIPS are more liquid now certainly than when they were first originated in 1997, and more popular to say the least. So, that market is now very well established.

PAULA HOGAN: Zvi?

ZVI BODIE: I think the point about TIPS was as they become more liquid the yield has gone down. That there was a liquidity problem at first.

JEREMY SIEGEL: Oh, I understand. Yes, there has been some debate. I've always questioned whether… People have talked about 50 basis points, Zvi, and I've always thought that may be a little bit high.

ZVI BODIE: I agree. I don't think it was so much a lack of liquidity as it was lack of familiarity.

JEREMY SIEGEL: Right. There may have been 20 basis points for a little less liquidity early on, and we've moved down. But that's a small part because remember, TIPS yields were over 4 percent in 2000 and now they're under 2.

ZVI BODIE: The other thing I wanted to address was the issue of which price index correctly reflects the cost of living. And I think the answer is you have different indices for different people. The Consumer Price Index, known as CPIU, which is the broadest index used, doesn't really reflect accurately my cost of living. But I envision, as these new types of instruments develop, indexation to a number of different indices. The financial markets are becoming more and more differentiated, and I think, again, a prediction as we move ahead, I think people will be able to choose what index they want linkage to. Certainly at a minimum there ought to be a separate cost of living index for the elderly and for the general population.

PAULA HOGAN: Question?

MAN: I have a question on—I found the LEAPS strategy very interesting. But I think the challenge a lot of people in this room probably use, long only, unlevered holding of index or index-like investments. And one of the challenges in any kind of an option strategy like that would be the market timing issue. We've certainly seen lots of studies of how there is no persistence of performance for market timing things. There is an element of market timing in option exercise strategies, and I'm wondering if you have some comments of how you overcome that.

JEREMY SIEGEL: Yes, what I would like to see, since most of the important goals that people have are long run goals—I would like to see much longer term options out there. And I don't think the vast majority of people are ever going to be directly buying options—participating in the options market. I think they're going to be doing it indirectly in the retail market because there will be products that have upside participation, which are option-like products. A good example of this are the principal-protected notes that you can buy, which essentially are a combination of a straight note, a zero coupon bond, with a seven-year call option, a European type call option. So there is no optimal exercise strategy there—seven years you get your principle back, plus some fraction of the appreciation in the underlying stock index. Merrill Lynch, for example, has a whole family of these, called MITTS, but every large securities firm has their own variant of it.

The problem with them as retail products is they are not standardized and complex. You have to read the fine print. Some of them have caps on how much you can make, and that makes a huge difference, because one of the attractions of call options is the unlimited upside. So, if you limit that you're taking away a lot of the attraction.

The other thing is sometimes the strike price that's embedded in them is way beyond where we currently are, and so they really are too arcane a product right now. You know, I think they are an intermediate step on the way to a menu of much more easily understood principal-protected or limited risk products with upside potential, linked to various equity indices.

PAULA HOGAN: Question here.

MAN: I'm going to create a term called an "emerging bubble," and ask generally whether there are any things you're seeing that we should be thinking maybe are persistently overpriced. But a specific one around whether there's any limit to the amount of debt, trade deficits and government deficits that we can sustain before that becomes an issue?

JEREMY SIEGEL: Okay, my reaction—instinctive reaction as an economist to the idea that there are looming crises or shortages, or things like that is, I look at prices or interest rates. It seems to me if there were a real crisis surrounding, say, willingness to hold U.S. Treasury obligations in the world, we would see higher interest rates. And that's the way it manifests itself. Unwillingness to hold obligations in the U.S. Treasury means, if it were true, the Treasury would have to offer a higher interest rate. Everybody is predicting rates are going to go up, but actually at the moment they are at a quite low level. So, I don't see any crises of that sort looming on the horizon in financial markets.

The real crisis comes when the baby boomers retire. If you look out at the next ten years—not that things can't happen, but that's the big wave. That is when they start retiring, and that's when Social Security—that's when debt gets really, really high. And then you have to wonder about some of the factors that I talked about during the main presentation.

MAN: My question is directed towards Professor Bodie. You mentioned the index single premium immediate annuities as somewhat of a panacea for meeting your future obligations and obligations potentially of our clients. But aren't you in effect simply transferring the risk of that future liability to the issuer of the annuity, and essentially creating a private pension plan? And then don't you still have the risk that the person making the promise to you could actually fulfill that promise when, in fact, you need your money the most?

I mean we've seen insurance companies default on their obligations to the general public. Unlike a pension plan that has some government insurance through the PBGC now—and the question would be just how much insurance that might be—is there any regulatory body involved trying to ensure that, in fact, the promises made to us by private corporate America are actually fulfilled 20-30 years from now and not shifted somewhere to some other division of their business, and they escape any future liabilities, because they cannot meet what they've overpromised at the beginning? So I think I'm very concerned that we still face the risk.
[APPLAUSE]

ZVI BODIE: The question is how risky is it to buy a life annuity, especially an inflation-protected life annuity, from a private life insurance company since there isn't any federal insurance—federal guarantees of the liabilities of those insurance companies? And my answer to that is this is something one worries about quite a lot. The group that I'm working with—we are working only with double A and better rated life insurance companies. As you're probably aware, there are state insurance schemes, and until we find a better solution—I personally think we need national level insurance of annuities. We have a Pension Benefit Guarantee Corporation that insures corporate defined benefit plans. I think we need national level insurance of life annuities. Or at least some type of national supervision of this. Because 50 state insurance agencies and regulatory authorities will not cut it if the baby boomer generation is going to be relying on these contracts as an important source of retirement income. So, I share your concern.
I think there are ways of dealing with it through a combination of government regulation and insurance and perhaps even better than that, if we can do it, financially engineering insurance. I don't know how many of you are aware of this, but the hottest sector of financial markets today at the cutting edge are so-called credit default swaps. And this is a very, very rapidly growing set of markets which essentially are providing insurance against default risk of private entities, including insurance companies.

So, I think some combination of government insurance, financial market insurance, but the credit quality issue is key. Absolutely key.

JEREMY SIEGEL: I would like to say—I guess I'm a little bit surprised, because if there was a little bit richer floatation of index bonds these could all be defeased. I don't understand what the concern is. I mean if we don't quite have every maturity that we need, and we have the idiotic Treasury saying they're not going to do any more having a maturity of 30 years and no one understands why—if we just get another one, all those could be defeased and then you'd just have a life insurance policy on top of that.

ZVI BODIE: Jeremy, the problem is that the state regulatory insurance authorities do not understand the simple concept of asset liability managing. I mean you're absolutely right. If the backing for these annuities were U.S. Treasury securities you don't need insurance. But very often the insurance companies take that money and go out and invest in the stock market, because stocks aren't risky in the long run.
[LAUGHTER]

JEREMY SIEGEL: I guess I set you up for that.
[LAUGHTER]

MAN: So, a bear like Jeremy Grantham would look at 2005-2006 and call equity expectations a black hole based on long term reversion to market capitalization of 15. And why do you think that the expected market cap multiple would be changing?

JEREMY SIEGEL: Okay, that's a very good point. The question is basically—Jeremy Grantham and some of those bears, including Bob Shore, says, well, the PE's going back to 15. That's the long run 50 year ratio, 100 year ratio, whatever. To which I answer, well, we'll only go back to that if markets and the economy are no different than they were over the last 100 years.

But there's a lot of difference that in my opinion justifies higher valuations on the market. And that's, by the way, one of the reasons why you're going to have slightly lower long term returns. Markets are much more liquid today. Diversification is much more easily attained than it was during former periods when we looked at PE ratios. People are taking on much more risk. Transaction costs have collapsed. I can go on, and on, and on for sound economic reasons—my feeling is you should be at about a 20 price earnings ratio. And that's, by the way, after subtracting options and making some correction for too optimistic pension returns. Right now Wall Street is looking for about $63, say, of operating earnings for the S&P 500. I would certainly cut it down by probably $5 for options and pension, and get it down to around $58, and then say you've got a 20 PE ratio on and that's where you are today. And that's what's going to give you your 5-6 percent real rate of return long run.

I think it all fits, and I just don't believe that looking at data 100 years ago, saying that that's where it's got to return to is the correct way to understand the markets.

MAN: Professor Siegel, earlier you made a comment about commodities, and I'd like you to expound a little bit on that regarding them as an alternative asset class and the correlation with equities.

JEREMY SIEGEL: Oh, the question on commodities—as an asset class that's an interesting one. Actually, in some of my long term studies energy stocks do really well, even though they've shrunk in market value. The question is should you have some commodity-based contracts one way or the other? Is that a valid asset class or not?

Well, we found out that outright gold is just not good as a real return. It's basically zero in the long run. It gives you short term protection, but not a good long run. Precious metals I don't think are really good. But when you're talking about some of the other assets like oil, coal, or Jeremy Grantham's favorite, timber, which has gotten really popular now—I hear Harvard's endowment fund is 12 percent into timber right now. Unbelievable. But, yes, there is some role in there, but again, my warning, there's only so much timber out there, and if everyone tries to get to 12 percent we're going to have the biggest bubble we've ever seen in history.

PAULA HOGAN: We're down to a scant five minutes, so we're either going to have one more question that's long or three really quick ones.

MAN: Hopefully a quick question for both of you. As I work with clients I pretty much start from the standpoint that the future will be more or less like the past. However, I tell them I have no idea what healthcare is going to cost, I have no idea what the accessibility is going to be for healthcare. And, consequently, when you do modeling it makes things a little bit difficult. From your macro perspective, liability perspective, outcome perspective, do you have anything that might be helpful to me in terms of modeling healthcare?

JEREMY SIEGEL: I'll just mention a few things. Zvi did mention, should there be a price index for the elderly which includes healthcare—and healthcare is the 800 pound gorilla that breaks the system. Actually, you look forward, it's not Social Security, it's really healthcare. And no one has a true clue on how that's going to evolve. And that is a key uncertainty.

ZVI BODIE: I'm pretty optimistic that we are going to see markets develop. In fact, I can foresee in the not too distant future even derivatives markets in healthcare. Just like we've seen the development of weather derivatives and other natural disaster derivatives. The point is this—there's no lack of capital in this world that's willing to take on risk. So, individuals as individuals shouldn't have to bear that risk by themselves as long as they're willing to pay for the insurance. It's not going to be free.

And I think the task of the financial advisor in the future is going to be like the role of medical professionals today. A large part of the task of professional physicians, family doctors, is to keep abreast of the latest developments in the field. New cures are coming out all the time, new pharmaceuticals. And I think that's what's going to be happening with financial products. You will see a constant and accelerating stream of new risk management products coming out, and you're going to have to guide your clients towards the ones that make sense for them.

PAULA HOGAN: We're going to conclude our presentation now with great thanks to Jeremy Siegel and Zvi Bodie.
[END]