

The \$7 Trillion Question: Mutual Funds & Investor Welfare - Alternative Structures and Strategies for Investors

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RICHARD A. BOOTH, MICHAEL DEGEORGE, JOSEPH HARDIMAN, HENRY HU,
SUSAN NASH, AND FRANK PARTNOY

The \$7 Trillion Question: Mutual Funds & Investor Welfare

ALTERNATIVE STRUCTURES AND STRATEGIES FOR INVESTORS

RICHARD BOOTH: I am going to keep these introductions very short in order to save time for talking substance. The biographical sketches, of course, are in the materials, and you can look them up if you need to know more about the actors. I am going to start on my far right, and sitting down there at the end of the table is Henry Hu, the Allan Shivers Chair of Law and Banking & Finance at the University of Texas Law School. The one thing I want to point out is that he's the only person I know who actually has a derivative contract named for him—the HUI—which is based on gold, isn't it?

HENRY HU: The HUI [Amex Gold BUGS Index] is an index of shares of gold mining companies that do little or no hedging as to the price of gold. In contrast, the other major index of gold stocks—the XAU—includes both shares of companies that hedge and of companies that do not hedge. The core economic objectives of HUI companies can be said to be different from those of the XAU companies.¹ As it happens, there is an analogous objectives issue in the mutual fund context. I'll return to this issue in a few minutes.

RICHARD BOOTH: It permits investors to buy an unhedged company like Homestake Mining and then decide whether they want to hedge away the risk that gold will fluctuate in price. It's a brilliant concept. I wish I had one named after me. I also should say that Henry is a three-time loser from Yale—three degrees from Yale, all Yale, nothing else. And actually Henry and Frank and I are all three Yale Law School graduates, so there's some kind of club going on here. Next to me is Michael DeGeorge, who is Vice President and General Counsel of the National Association for Variable Annuities, NAVA. Michael is a graduate of this law school. Let's just say, "Fear the turtle."²

1. For discussions of the HUI and XAU, see, e.g., Henry T. C. Hu, *Behind the Corporate Hedge: Information and the Limits of "Shareholder Wealth Maximization,"* J. APPLIED CORP. FIN. (Fall 1996) at 39, 49–50; John Dizard, *A golden oldie still comes out on top,* FIN. TIMES, Sept. 13, 2002, at 20; Ron McEwan, *Going for the gold: S&P 500 vs. XAU,* FUTURES, Jan. 2003, at 26.

2. The reference is to the terrapin, the mascot of the University of Maryland, College Park.

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On my left is Joseph Hardiman, also an esteemed graduate of this law school and former chair of our Board of Visitors. He is the former president of the National Association of Securities Dealers and President and Chief Executive Officer of Nasdaq. He is also an independent board member for a variety of mutual funds.

On his left is Susan Nash, Associate Director of Disclosure and Insurance Product Regulation at the Securities and Exchange Commission, a graduate of Notre Dame and the University of Chicago, as well as Harvard Law School. Susan will, I am sure, give you the standard disclaimer, which most of us have heard many times before, but she must say it.

SUSAN NASH: The Securities and Exchange Commission disclaims responsibility for any private publication or statement of any SEC employee or commissioner. This discussion reflects my views but does not necessarily reflect those of the Commission, the commissioners, or other members of the staff.

RICHARD BOOTH: Finally, on the far left—I don't know if that's a reflection of his politics or not—is Frank Partnoy, Professor of Law at the University of San Diego. Frank is also a former derivatives guy from Morgan Stanley and C.S.F.B. and also a graduate of Yale Law School. So, we've got bulldog power here—bulldogs versus turtles and whatever the fighting Irish are up to. I want to take three or four minutes myself to say something that I probably should have said at the very beginning of the conference this morning. Aside from a fascinating conversation I had with Jim Hanks last spring, part of the motivation for doing a conference in this area is the fact that so many investment companies are based in Maryland. We think of ourselves as the Delaware of investment companies here. In addition, it strikes me that there has been remarkably little scholarly attention paid to the place of mutual funds, and other investment companies except for a flurry of activity having to do with why it is that mutual funds are not more engaged in corporate governance. That is a very lively debate, but not one that we are going to continue here. I think it's a tragedy really that more attention isn't paid among legal academics to mutual funds as investment possibilities and sort of dealing with some of the issues that arise there.

One basic point that I want to make is that rational investors diversify. I am sure Henry is going to have something to say about this, but through diversification, and relatively modest diversification, an investor can eliminate the risk that goes with investing in a single stock. In other words, stock picking is a very risky proposition. You take ten times as much risk as you need to by investing in that fashion. Mutual funds are a very cheap way of achieving diversification—maybe not as cheap as they could be. We talked a bit about that this morning. There are lots of hidden fees and trading costs, but that has to do with improving the way funds operate, not the merit of the idea itself. On some level many investors understand that it is important to diversify because it is why they are willing to pay some of the sales loads they historically have been willing to pay. In addition to offering diversi-

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fication, a small investor gains access to buying power with respect to commissions and other services.

Individual investors cannot hope to trade at a penny a share as institutional investors can. Of course, commissions have increased in recent years and have become less of a motivation for buying into a mutual fund than they once were. At the same time, interestingly enough, loads have also decreased. There is more competition over fees at the fund level. So I think competition has been working there.

But to get back to the diversification point here for just a second, you can argue not only that diversification makes sense, but that investors must diversify because—like Gresham's Law—diversified investors drive up the cost of equities because diversified investors take less risk. Less risk means you are willing to pay more for an investment. Consequently, one who fails to diversify overpays. You can think of it either as taking too much risk for the same amount of return or paying too high a price for stock. The bottom line here is that investors must diversify in order to make a market rate of return.

But here's the catch: A recent study by the Investment Company Institute about equity ownership in America found that, on the average, individual investors have four stocks in their portfolios. That is the average, and there are lots of people with fewer than that. But the median is four different stocks. It takes twenty to achieve real diversification, and is the number specified in the Investment Company Act. Few funds have fewer than thirty-five or forty different stocks in the fund, and those are the ones that are actually trying to concentrate a bit in stock picking.

Here is the point. The recent scandals having to do with mutual funds are nothing less than tragic because they have done serious damage to the willingness of individuals to invest in funds and probably will push them back into other modes of investment where they are less likely to diversify. There are many reasons people sometimes steer away from mutual funds. Some people think the managers have a herd mentality—everybody tries to invest in the same thing. Other people say that big funds are just closet indexers. John Bogle said at lunch today that Fidelity is so big that it really cannot avoid being indexed. I don't think that's a bad thing, but some people do. In any event, now there is one more reason not to invest in a mutual fund and one more excuse for not being adequately diversified—that is a result of the distrust that has come from the mutual fund scandals.

So the question is, What are the alternatives? That is why we have people here who are going to talk about alternatives—things like variable annuities, individual accounts, separate accounts, and folio investing. So that's what we are talking about on this panel. With that, I am going to turn it over to Henry Hu.

HENRY HU: Thank you, Richard. Many of you are no doubt familiar with the story of a mathematician, a theoretical economist, and an econometrician being asked to find a black cat in a closed room with the lights off. They were *not* told that, in fact, there was no cat in the room.

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The mathematician goes crazy trying to find a black cat that doesn't exist inside the darkened room and ends up in a mental hospital. The theoretical economist is unable to catch a black cat that doesn't exist inside the darkened room but exits the room proudly proclaiming that he can construct a model to describe all his movements with incredible accuracy. The econometrician walks into the darkened room, spends one hour looking for the black cat that doesn't exist—and shouts from inside the room that he's caught the cat by the neck.

Unlike the nonexistent cat in that room, in this room we know that risks *do* exist. This is so even when investors rely on mutual funds and hedge funds. Unfortunately, however, the perception problems here are no less serious. Far too many investors, both ordinary investors as well as institutional investors, misperceive the risks associated with these collective investment vehicles.

Let me touch on three categories of misperceptions. First, in terms of stocks, the key long-term asset class, there is a mathematical problem. Second, in terms of the “managerial overlay” on top of the asset class, there is a theoretical problem. Third, in terms of the move away from “traditional” investments to alternatives such as hedge funds, there is what could be loosely described as an econometric problem.

First, the mathematical problem. For most ordinary investors and many institutional investors, the bedrock model that is relied on consists of three core beliefs. First, stocks offer higher returns over other asset classes over the long run. Second, stocks are riskier than other asset classes in the short run. Third, investors holding broad portfolios of stocks over the long run can enjoy the superior returns of stocks because the higher risk of stocks will diminish to insignificance as the day-to-day price fluctuations somehow “cancel out” over time.

In terms of empirical support, the Ibbotson numbers seemingly confirm the validity of the bedrock model.³ They show that stocks have indeed done better than other asset classes in the past. Stocks have proven risky in the short run—that is, there are exceptional years and there are disastrous ones. But the longer the investor holds stocks, the less likely, historically, he or she has been to lose money. That is, in most five-year periods, almost every ten-year period, and every twenty-year period since 1926, investing in stocks would have gotten some kind of positive return.

Not surprisingly, the notion of “time diversification” has taken hold. A young investor would invest fully in stocks, taking advantage of the many years he or she has left before retirement because the risk goes away with time. Time diversification has a certain intuitive appeal. Some years stock market returns will be good while in other years they will be bad. With enough rolls of the dice, the average returns will come out to the magical ten or eleven percent—minus the two or three percent in expenses that Jack Bogle referred to at lunch. This bedrock model is reiterated in

3. See, e.g., IBBOTSON ASSOCIATES, STOCKS, BONDS, BILLS, AND INFLATION—2005 YEARBOOK: MARKET RESULTS FOR 1926–2004 15 (2005).

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countless newspaper advice columns and self-help investment guides. It's the subtext of many prospectuses and much mutual fund sales literature. The SEC itself promotes this notion.

I expressed concerns over time diversification and the bedrock model in an article published, as luck would have it, in the spring of 2000.⁴ I argued that these ideas are best characterized as one investor religion, one particular religion in a world where alternative sets of beliefs are plausible.

Among other things, I did a little thought experiment involving a kind of derivative that I refer to as a "fountain of youth" swap. This swap seemingly flows directly from—indeed, embodies—this set of investor beliefs. Although the swap has qualities that would be highly attractive both to investors and to derivatives dealers, this financial product does not appear to exist. One is reminded of Sherlock Holmes's "curious incident" of the dog that didn't bark. The derivative's nonexistence may suggest something about the validity of the bedrock model. I proceed to talk about such matters as the "equity premium puzzle" and the surprising dependence of the bedrock model on American exceptionalism.

One of the main matters I discussed relates to the mathematics underlying the bedrock model. The bedrock model's notion of "canceling out" risk is enormously controversial among scholars. One thing everybody agrees on: If you hold a diversified portfolio of shares for the long run, the *year-by-year* returns will indeed likely converge to some kind of long-term rate of return. But the *cumulative* returns—that is, the "terminal wealth" or, for those who are more sanguine, the wealth at retirement—do *not* necessarily converge. As a matter of mathematics, if those rolls of the dice are independent—that is, if the year-by-year returns on stocks are independent—the dispersion of terminal wealth will increase rather than decrease as the years pass. That is, over time, if you hold a broad portfolio of stocks for twenty to thirty years, there is a chance you are going to have to survive on bugs and leaves in your old age—perhaps a lamentably brief old age given the outlook for Social Security.

Mathematically, in order for the advice to the young to be fully invested in stocks to be fully persuasive turns out to depend on two things. First, it depends on those rolls of the dice not being independent. That is, there needs to be a certain degree of "mean reversion" as to year-by-year returns. And this is a necessary but not sufficient condition. A second condition is that the investor must have a particular pattern of risk preferences. This first set of misperceptions, relating to the key long-term asset class thus involves mathematical errors.

The second set of misperceptions relates to the managerial overlay that sits on top of the asset class. Who—in theory—is to be responsible for the most important investment decision, the mutual fund investor or the mutual fund manager? Many

4. See Henry T. C. Hu, *Faith and Magic: Investor Beliefs and Government Neutrality*, 78 Tex. L. Rev. 777 (2000).

investors believe that it is their fund managers. In fact, most fund managers think and act otherwise. As a result, these investors misperceive the basic theory of the mutual fund.

This theoretical problem stems from a combination of two factors. The first factor is that with actively managed portfolios, empirical studies basically suggest that something like eighty percent to ninety percent of investment returns come not from individual stock selections but from asset-class positions. That is, how much is held in stocks generally versus bonds versus cash matters far more to overall investment results than the usual money manager's selections as to individual securities.

The second factor is that many ordinary investors assume that with the usual stock fund, managers have heavy, if not primary, responsibility with respect to the asset-class decision. These investors think that if a typical stock fund manager thinks the stock market will fall dramatically, the fund manager would simply go largely to cash. But that manager may well refuse to do so even in such circumstances. The usual stock fund manager will assume that the investor has implicitly made the asset-allocation decision simply by holding shares in a stock fund. The manager believes that he is to be a stock play in his investors' portfolios: "I won't go more than ten percent, twenty percent cash, max." (The stock fund manager thus thinks of the fund as offering a "pure play" on stocks, much as the managers at the "HUI" gold-mining companies referred to earlier this afternoon think they offer purer plays on gold than gold-mining companies that hedge with respect to the price of gold.)

The combination of the asset-class decision's being the key investment decision and fund managers acting as if fund investors' having made this decision means that investors themselves are making the primary investment decision. Many ordinary investors are unaware that they are in the driver's seat.

Let's now turn to the third problem—remember the econometrician who claimed to have found and seized that nonexistent black cat? In some ways, that econometrician reminds me of a few hedge fund managers. These "bad apple" hedge fund managers are tempted to suggest that they have found the proverbial free lunch—high absolute returns at minimal risk. Because they're smart, they can find and seize incredible investment opportunities, especially in "inefficient" markets involving nontraditional asset classes. Some hedge fund managers are indeed exceptional. I'm concerned instead about the nonexceptional poseurs. Not all pension funds and other institutional investors are fully capable of differentiating between the two.

In this hedge fund context generally, another misperception issue is that some institutional investors seriously misestimate how bad the worst case is. The cognitive bias literature informs us that one of the standard biases humans have is to ignore the low probability/catastrophic event—that is, the 100-year flood. The chances are so low you basically ignore it, even though, if you're perfectly rational,

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you ought to make some accommodation for the possible occurrence because the consequences are so disastrous.

In the institutional-investor context, this tendency to ignore low probability/catastrophic events manifests itself in the excessive reliance on techniques such as value at risk (VAR). Let's think about VAR: By its terms, VAR ignores the worse case. As many of you know, VAR involves asking questions like, "At a ninety-nine percent level of probability, what is the maximum amount I can lose over the next twenty-four hours or the next week or the next year?" Well, guess what? You don't really care, as a pension fund, about the ninety-nine percent. What you should really be caring about is that other one percent—that's the situation that can kill you. Or put another way, the fundamental question VAR asks is simply, "What is the worst case in *normal* circumstances?" not, "What is the worst case?"

RICHARD BOOTH: Henry, may I pose a question here? It is odd, and I had not thought about this before, but it seems like people usually buy insurance for exactly those kinds of events—the catastrophic thing that is very unlikely to happen. Why is it that investors think oppositely?

HENRY HU: Well, in fact, that gets to the segue. I am very close to the concluding point, so let me finish. Some institutional investors, such as some pension funds, make associated mistakes in terms of evaluating the strategies of the hedge funds they may be investing in. A lot of these hedge funds invest in derivatives, sometimes exotic derivatives, where the derivatives are priced based on highly esoteric mathematical models. Well, guess what? These mathematical models are typically based on assumptions like continuously trading markets, continuing liquidity—assumptions that fall apart in low-probability/catastrophic circumstances.⁵

So you have the ironic situation where, in fact, you have pensions investing in these hedge funds in the search for low-risk, low-market correlations, and so forth. In fact, the risks may be much larger than they really think. Precisely in those moments when you really care—that is, in times of market stress—these investments often don't work.

Now all of the foregoing is leaving aside, of course, all the issues having to do with fraud and misvaluing securities in hedge funds and related matters. To play around a little bit with what Woody Allen once said about something else, recent headlines suggest that with some hedge fund managers, their lack of investment expertise is more than compensated for by their keenly developed moral bankruptcy. And in terms of the kind of issue relating to Richard's point, there are a number of ways of generating great-looking "Sharpe ratios"—high returns at low risks—when in fact the true risks are huge (and true risk-adjusted returns are low).

5. Mr. Hu originally expressed this modeling concern in 1993 and subsequently discussed it in the context of the 1998 collapse of the famed hedge fund Long Term Capital Management. See, e.g., Henry T. C. Hu, *Misunderstood Derivatives: The Causes of Informational Failure and the Promise of Regulatory Incrementalism*, 102 YALE L. J. 1457 (1993); Steven Lipin, Matt Murray, & Jacob M. Schlesinger, *Bailout Blues: How a Big Hedge Fund Marketed Its Expertise and Shrouded Its Risks*, WALL ST. J., Sept. 25, 1998, at A1.

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RICHARD BOOTH: I think Frank has some things to say about that.

HENRY HU: Let me conclude. Woody Allen, again, the great philosopher, once said, "I took a speed-reading course and read *War and Peace* in twenty minutes. It involves Russia." Now, I speeded through these misperceptions about risk in about twenty minutes. The only thing I could really tell you is that the risks—whether in terms of asset class, managerial overlay, or "alternative investments"—can be radically different from what you might first think.

RICHARD BOOTH: On that note, it sounds like we are on the investor-education theme here. Susan may have something to say about that, too. But Frank, you have other issues that you don't think investors seem to understand or perhaps need to understand better.

FRANK PARTNOY: So this could either be the investor-education panel or it could be the Woody Allen panel. Henry's quotes remind me of Woody Allen's definition of—I think it was a definition of a broker but it could equally be attributed to a fund manager—of someone who invests your money very diligently, hour after hour, day after day, year after year until all of it's gone. [laughter] And maybe that fits in with the theme of some of the things I'm going to say.

I'd like to talk about what I think are a couple of 800-pound gorillas that have been in the room all day. About half of the panelists have mentioned either products or services. I think it was basically split between people calling mutual funds products and people calling them services. My paper is essentially a claim that this distinction between products and services is an important one. It's one that we should take seriously. It's one that is of great descriptive value in looking at the investment-vehicle universe. It's one that's going to become more important and that we should embrace from a regulatory perspective. So, I guess you could say that this presentation maybe will have something for everyone to hate, on both the products and the services side.

I'd like to start with a couple of quotes from leading commentators in the area. First, from Jim Glassman: "Most investors think a fund is a *product*, like a certificate of deposit issued by a bank. If you don't like it, you sell it and buy another one."⁶ We've heard several people talk about funds as products today. And then from Steve Wallman: "It might make sense to permit funds to structure themselves the way people actually think of them—as *services* bought based on performance and cost."⁷ So what I'd like to suggest today is that this distinction between product and service is an important one, and that people have been much too casual about talking about what's a product and what's a service.

6. James K. Glassman, *Mutual Fund Folly*, WALL ST. J., June 24, 2004, at A16 (emphasis added); see also James K. Glassman, Resident Fellow, Statement to the Senate Committee on Banking, Housing, and Urban Affairs, American Enterprise Institute February 25, 2004 ("The way to rationalize and modernize the current system is to treat mutual funds as investment *products* instead of companies") (emphasis added).

7. Steven M.J. Wallman, *Funds Need a Radical New Design*, BUS. WEEK, Nov. 17, 2003, at 47 (emphasis added).

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The product-services distinction is a standard one in economics, so I'll start with a little bit of Economics 101 on products versus services. As a general matter, products are tangible goods that can be inventoried or standardized, whereas services are intangible processes that can be simultaneously produced and consumed.⁸ In many substantive areas, both economics and law depend on the product-services distinction, with good reason.⁹ Products generally are subject to greater competition and less regulation than services, in part because product markets typically have lower agency and transaction costs than service markets.

The product-services distinction closely relates to an important question in the ongoing mutual fund controversy: What is the role of financial innovation? In general, innovation leads an economy away from products toward services,¹⁰ although in finance, the effects of innovation have been more complex.¹¹ With respect to mutual funds, financial innovation has generated new types of funds that are largely productlike, but it has also generated incentives for actively managed funds to become more servicelike. Increasingly, financial innovation is creating a split in the mutual fund industry between products and services.

So, what do I call a product? I would include "pure" exchange-traded funds [ETFs]; low-fee, low-turnover index funds (so we might include Vanguard as a product, even though Jack Bogle probably would not embrace that definition); and stock baskets, such as "folios," which are like exchange-traded funds except that they involve smaller numbers of stocks and are typically flexible in terms of stock selection. I think that in the future we'll see much more movement towards productlike funds that are essentially baskets of stocks.

Then on the service side we have actively managed funds, "enhanced" index funds, specialty funds, and hedge funds. My claim is that these two categories are quite different and that we can really draw a line here, between these two classes of mutual funds and other investment vehicles. The "service" items are very different in part because they generate greater agency costs. They involve human behavior, human decisions, and the kinds of elements that we would associate generally with services. The "product" items are more like commodities, with lower agency costs

8. See, e.g., J.M. Rathmell, *What Is Meant by Services*, J. OF MARKETING (October 1966), at 32–36 (discussing distinctions related to tangibility, inventorying, standardization, production, and consumption). For example, economists have noted that the marketing of services differs considerably from the marketing of products. See John E.G. Bateson, *Why We Need Service Marketing*, in *CONCEPTUAL AND THEORETICAL DEVELOPMENTS IN MARKETING* (O.C. Ferrell, S.W. Brown and C.W. Lamab eds.) (Chicago: American Marketing Association Proceeding Series, 1979) 131–146.

9. Tax regulations are the most prominent example. See, e.g., Charles E. McLure, Jr., *Taxation of Electronic Commerce: Economic Objectives, Technological Constraints, and Tax Laws*, 52 TAX L. REV. 269 (1997) (noting the differential tax treatment of products and services). The definition of a "security" also poses issues analogous to the product-service distinction.

10. For example, economies have evolved from a focus on food, water, clothing, and shelter to a focus on fuel, machinery, and supplies to a focus on electricity, bandwidth, and professional services.

11. See Frank Partnoy, *INFECTIOUS GREED: HOW DECEIT AND RISK CORRUPTED THE FINANCIAL MARKETS* (Times Books 2003) (describing recent history of financial innovation).

and less human decision making. So hopefully I'm going to persuade you that this is a viable distinction. But my basic point at the outset is that we can divide the universe up into these two clean pieces.

Now, how did the world used to look? We've talked a little bit about history today, including the history of the mutual fund universe. This chart [depicting a bell-curve shaped distribution with products on the left and services on the right] is a very simple picture of the historical view we have discussed. There were some pure "products" in the old days, even going back maybe ten or twenty years, but really the bulk of mutual funds were somewhere in the middle—they were providing some services, but they had some productlike or commoditylike elements. And by the way, I know that Jack Bogle doesn't like the word *product*, but he did use the word *commodity* in his talk a couple of times.

My claim is that this next chart [depicting a distribution that is low in the middle and high on the left and right poles] is a more accurate picture of where we are today and where we are headed. Whereas in the past, we didn't have as many hedge funds or "pure" service investments on the right, we now have many and we have an increase in advertising trying to persuade investors to pay for additional services. Whereas in the past, the "bread and butter" funds were the big-name growth funds, today we've had a proliferation of ETFs and index funds. One could argue that the cognitive errors we have talked about a little bit today and that Alan Palmiter talked about have pushed people to the service side and, at the same time, more rational investors have moved toward the product side.

Let me just give you some evidence to support this claim of movement to the poles. We have here a picture of the growth of ETFs. We are all familiar with exchange-traded funds, and I see some prospectuses on the table here, so I'm guessing we're going to hear more about them a little bit later as well. But it is safe to say there has been very substantial growth on the product side. All of this data is from the Investment Company Institute. These are data for four ETFs [chart depicting trading volume, shares outstanding, and short interest for QQQ, SPY, IWM, and DIA ticker symbols]. If we just look at QQQs, which are based on the Nasdaq 100, we see enormous volume: Up through September of this year there were 18.5 billion shares traded, and average daily volume of 68 million. Total shares outstanding are 600 million. And notice the short interest, the amount of shorting of these stocks. Short interest represents roughly half of the float—over forty percent. And we see the similar kinds of numbers for Spiders [SPY], I-Shares/Russell 2000 [IWM], and Diamonds [DIA]. You can just look at these very substantial numbers, and what do they show? These are commoditylike numbers. These are very productlike numbers. These instruments look like products.

At the same time, we have had tremendous growth on the service side, and I will show this from a couple of different perspectives. One is the growth in the number of hedge funds. This is, again, just a picture, and you don't need to look at all the numbers just to see more hedge funds approaching 10,000 and projected to go up.

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And in terms of dollar value, estimates are approaching \$2 trillion in the next few years. Even within the mutual fund universe we can see lots of servicelike components. This, for example, is a chart of equity-fund redemptions; notice how sticky human behavior is. Over time the level of redemptions went up slightly after the '87 crash, and it has gone up slightly this year. One way of viewing this chart is that no matter what we do, people are going to engage in a certain percentage of redemptions and it doesn't change much over time.

Another way of saying that people don't change their behavior much over time is that, although we have had this deterioration or diminution of the number of funds that charge a load versus no-load funds—even without getting into other expense issues—it has taken a long time for investors to move from load to no-load funds. The percentage of load funds did not drop below the no-load percentage until just last year, which again shows growth on the service side among these actively managed equity funds. And there's a lot of stickiness in terms of people participating in the market. I don't have charts here for this, but we all know that there have been increased expenditures on fund marketing.

Here is one final chart, and then I'll go into maybe the more interesting and more controversial part. This just shows the growth of the derivatives market overall, the market Henry discussed. This next chart shows mutual funds. I've included a section of some of the reading that I gave to Richard, on the mutual fund scandals of the mid-'90s. These scandals weren't that long ago, but people today are no longer talking much about derivatives use by mutual funds and related disclosure. There is abysmal disclosure by mutual funds. I'll get to that in just a second, but for now it is worth noting that one of the factors generating growth at both poles of the fund industry—products and services—is the use of derivatives. It is part of some exchange-traded funds, which use futures—that's mostly on the exchange-traded side. But there has also been an increase on the services side, with fund managers and particularly hedge fund managers using derivatives, primarily for hedging but also for other purposes.

Here is my prediction about what's going to happen: We're going to move to the poles. There will be a greater product-services split, and the traditional fund—a combination of products and services—is going to go the way of the dinosaur. Instead, we'll have a bifurcation of roles, with a focus on providing a product where people want a product, and the separation of providing the various services funds can provide. I also think Henry's description of asset-class mistakes fits in with this story. The rational people, the people who aren't making mistakes, are moving to the poles. They're moving to the product pole for lower fees and ease of transactions, and they're moving to the services pole—particularly hedge funds, because they at least perceive that there's something the funds are doing that adds value. But there is also a behavioral piece to this, that people are making mistakes on the service side. I think a lot of the growth on the service side is due to these kinds of

mistakes. And finally, of course, there is arbitrage activity, which is also leading to growth on the services side.

Now let me turn to what might be the most controversial part and spend a couple of minutes on the prescriptive claim. I don't know whether you agree with me about the product-services distinction. At minimum I will plead with you to be more careful in using the terms *product* and *service*—and I hope we will be a little less casual in using those terms. But to the extent you agree with the product-service distinction, I would like to push a little bit an argument about how regulation might depend on the distinction, specifically how rules might vary based on product versus service.

We currently have a regime where we have a categorization based on a variety of other factors: Do you fall within the '40 Act or not? Do you qualify for "hedge fund" exemptions? Are you an ETF so that you are differentially regulated, at least with respect to pricing? My argument is that instead of breaking the investment fund world into these categories, we should have a substantive categorization that divides the world into products and services and regulates them differently. In the product markets, we would have regulations similar to the regulation of other products. We would have a tortlike system that provided for civil liability for negligence. We would have a suitability regime. We would implement the same sorts of regulations we use for the sale of other "products" such as securities, but we wouldn't worry about the agency cost issues that arise more frequently in the sale of "services" (such as questions of professionalism that come into play when you have human agency).

We could implement such a regime in several different ways. A regulator might make these categorical distinctions, saying which funds were products and which were services. The distinction could be based on objective factors, such as volume of turnover or an analysis of the funds' disclosures regarding holdings, trading activity, or strategies. The distinction could be based on fees. It could simply be a line based on how high the fees are that the fund charged. The regulator could permit the fund participants to elect their regulatory regime—product or service—and then be governed by the set of rules applicable to the category they chose. The regulator could adopt standards describing what is a product and what is a service, and then direct participants to select which regulatory regime applied to you. We might enforce decisions or punish behavior *ex post* through an enforcement regime.

And how does the regulation of products and services differ? You would likely have different disclosure regulations, for example. Products would have very limited disclosure requirements, perhaps limited to disclosing periodically the components of the fund's portfolio. But services would need to disclose much more, particularly with respect to issues of potential conflict of interest, high direct and indirect fees, use of financial innovation, and so forth.

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With respect to disclosure, I looked at a number of fund prospectuses to determine the level of disclosure with respect to financial derivatives, a particular area of interest for me. In 1994, the SEC Division of Investment Management complained that fund disclosures regarding derivatives were “lengthy and highly technical in nature” and encouraged funds to find disclosure that could be “deleted, reduced or modified to enhance investor understanding about pertinent risks.”¹² This slide shows an example of the disclosure for one family of funds, in this case Scudder. This is a description of what many of the Scudder funds do with derivatives, and it basically doesn’t say anything at all. So this is up there just as a visual to show you. Looking at these tiny words, you are getting basically as much value as you can get, even if you were to read every word carefully.¹³

I would require much more disclosure, something like what Canadian or Indian mutual funds are required to disclose, with respect to use of derivatives. I’m still worried about mutual funds and derivatives. I don’t think we resolved the derivatives problems in 1994 and 1995. I still think they’re there. I just think we don’t know about them.

Other product-services distinctions might be made with respect to prudential regulations, aspects of fund activity we already regulate, such as liquidity, leverage, portfolio selection, diversification—some of the themes Richard Booth began the panel with. We would still have that sort of regulation, but it would vary depending on whether a fund was a product or service. We would have much different regulations for products and, in particular, we would have continuous pricing for products. There is no reason to have a once-a-day pricing rule for products. Prices should be available continuously throughout the day, not just at 4:00 p.m. As for services, I would say they should have the option of either adopting continuous pricing or if they had a valid reason for not wanting to price every day—if they

12. Investment Company Filing Guidance, 1994 SEC No-Act. LEXIS 470, at *14 (Feb. 25, 1994).

13. “Other Investments. The fund is permitted, but not required, to use various types of derivatives (contracts whose value is based on, for example, indices, currencies or securities). In particular, the fund may use futures and options, including sales of covered put and call options. The fund may use derivatives in circumstances where the managers believe they offer an economic means of getting exposure to a particular asset class or to help meet shareholder redemptions or other needs while maintaining exposure to the market.

“Other factors that could affect performance include . . . derivatives could produce disappointing losses due to a variety of factors, including the unwillingness or inability of the counterparty to meet its obligations or unexpected price or interest rate movements.

“Derivatives Risk. Although not one of its principal investment strategies, each fund may invest in certain types of derivatives. Risks associated with derivatives include: the risk that the derivative is not well correlated with the security, index or currency to which it relates; the risk that derivatives used for risk management may not have the intended effects and may result in losses or missed opportunities; the risk that a fund will be unable to sell the derivative because of an illiquid secondary market; and the risk that the derivative transaction could expose a fund to the effects of leverage, which could increase a fund’s exposure to the market and potential losses. There is no guarantee that derivatives’ activities will be employed or that they will work, and their use could cause lower returns or losses to a fund.”

Source: Various Scudder Prospectuses (e.g., 21st Century Growth, Aggressive Growth, Dynamic Growth).

only want to price once a week or once every few days—that would be fine as well. But not everyone should be subject to the same pricing rule—it just doesn't fit.

Several people today have suggested that fund managers should owe additional fiduciary duties, either through a new federal statute or some other mechanism. My argument suggests that there should be no such fiduciary duty for products. One of the benefits of being a product is reduction of agency costs, and there is no good reason to increase the cost of a product by imposing fiduciary duties where they are not needed. But whereas products might require only light regulation, services arguably should be subject to the same fiduciary duties that apply elsewhere when agency costs are present, e.g., corporate law. If a fund is providing services, its owners should be able to bring private rights of action, including claims for breach of fiduciary duty. The same goes for governance. Governance is far more important for services than products, and again one size is unlikely to fit all. Fund products are unlikely to be interested in governance, because it is a costly enterprise that their customers are unlikely to value. Put another way, fund products that ignore governance can offer a lower-cost product than their competitors that focus on governance issues.

For example, one of the most interesting aspects of ETFs and governance is how they approach voting. The behavior of ETFs supports my claim that product regulation should be different from services regulation. The prospectuses for both Spiders and Diamonds state that “The Trustee votes the voting stocks of each issuer in the same proportionate relationship as all other shares of each such issuer are voted to the extent permissible and, if not permitted, abstains from voting.”¹⁴ In other words, the way voting works in these ETFs now is that beneficial owners do not have the right to vote; the trustee has the right to vote, so that's standard. But the trustee votes the voting stocks of each issuer in the same proportionate relationship as all the other sharers, which is essentially the ETF saying our votes don't count. If the vote is 80–20, we vote 80–20. If the vote is 50–50, we vote 50–50. I'd be very interested to know if people have thought about this, but the language that's in here is “to the extent permissible and, if not permitted, abstains from voting.”¹⁵ So the ETF is essentially taking itself out of the governance process. But I don't even understand how this works. Do you submit a proxy that says would we do what the other guys did? I'm not sure. But anyway, it is evidence that in the market the productlike funds are saying that our involvement in corporate governance and voting isn't worth the cost. And I think this is very provocative because we heard a lot of discussion at lunch today about how passive investors—the indexed investors—should have an active role in corporate governance, which is quite expensive. And here we have a passive diversified approach that is essentially taking itself out of the voting process.

14. DIAMONDS 2004 Prospectus, at 59; SPDRS 2004 Prospectus, at 64.

15. *Id.*

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And so here is the last point. I don't know if this is provocative or not—what's provocative at this hour? But my attempt is to make this provocative. The idea is that voting and governance activities will move—maybe because it should move from a regulatory perspective, but more likely just because this is the way the market will move—away from having the productlike funds involved in governance at all—not voting, not participating in governance because it's too expensive. And so we should think about the voting issue and governance, generally, as a service, as a separate service that can be provided. I know that Steve Wallman has a new proxy-governance service that is going to be competing with ISS. I think this will be, over the next year or so, a very hot area. So the prescription would be that we should think about—or at least start to think about—voting as a differential regulatory approach, and we should put a lighter hand from a regulatory perspective on products and a heavier hand on services.

I have been going on for too long, probably, but again, I kept a list of all the speakers who used these words—*products* and *services*—and I know that instrumentally calling funds a product leads to one conclusion. And calling funds a service leads to another conclusion. But I really do think we need to be careful about talking about products versus services.

RICHARD BOOTH: Thank you. That was provocative. I'd like to hear Susan's reactions to this. We ought to stop and get some reflection on that before we go over to Mike.

SUSAN NASH: I think that as a theoretical construct, it's an interesting concept. However, as a practical construct for an agency like the Securities and Exchange Commission to implement, I think it would be difficult.

One thing the Commission has never really done—and I don't think that it is particularly well suited to do—is to get into the business of making substantive decisions. Dividing funds between products and services, and deciding whether each particular fund falls on one side or the other of the product/service line, would put the Commission squarely into that business. There are calls from time to time for the Commission to get involved in substantive decisions. For example, some observers have said the Commission should define precisely which stocks are value stocks and which funds are value funds. I think this type of labeling and substantive categorization, while it may be valuable, is perhaps better left to the private sector. For that reason, I think that looking to the Commission to divide funds into two categories—products and services—would probably not work well.

I also think that the proposed regulatory structure ignores, to some extent, one of the bedrock principles of the Commission and Commission regulation. In determining how a security is regulated, it is important to look not only at the nature of the security but at the nature of the investors in the security. The extent of regulation has often been calibrated to the sophistication of the investors, on the theory that sophisticated investors are better able to fend for themselves in performing necessary due diligence. I think that dividing funds into products and services—

with lighter regulation for products—tends to discount the nature of the investors involved and the level of investor protection that is appropriate.

I would like to articulate, partly in response to the proposed regulatory structure that Frank put forth, and also in response to what I have heard throughout the day, what I believe are the twin pillars of fund regulation in our current system. Those pillars are the board of directors and full and accurate disclosure.

Throughout the day, boards have been talked about a lot, and the premise has been put forth that funds should be managed by their portfolio managers and not by the board of directors. From my point of view, that is certainly the case—a fund's board of directors is not charged with managing the fund. The fund board is, however, charged with being a watchdog for the shareholders. That role requires that the board get involved when there are conflicts of interest or potential conflicts of interest on the part of the fund's investment adviser.

With the board in place to watch for conflicts, the question becomes, What else does the regulatory structure need to provide for shareholders? I think the answer is information. Disclosure is intended to put information into the hands of shareholders so that they can make informed investment decisions. Disclosure can also serve the additional purpose of affecting behavior.

The last panel talked about the Commission's recent fund proxy rules. Those rules are a very good example of the twin pillars of our regulatory system at work. In those rules, the Commission looked to fund boards of directors to manage conflicts of interest. The board sets proxy-voting policies and procedures for the fund. The board will perhaps typically leave to the portfolio manager the day-to-day voting of fund proxies, but the board plays a key role, setting the voting ground rules in order to address potential conflicts of interest and looking at actual situations where conflicts arise. The Commission also used disclosure in the proxy rules. Proxy-voting policies and procedures, and actual proxy votes, are required to be disclosed. As a result, investors who want to see this information can see it. In addition, the disclosure of proxy votes should make funds think a little harder about how they vote, particularly in situations where there may be a conflict of interest.

RICHARD BOOTH: I had one question about that. There is some precedent, I think, for what Frank was proposing in the regulation of electronic communications networks. They were given the choice of being registered either as an exchange or as a broker-dealer. Whatever seems to fit better you just choose.

SUSAN NASH: That's a bit different from what I heard Frank suggesting that the Commission do. I understood him to suggest that the Commission establish substantive standards that would distinguish funds that are products from funds that are a service.

RICHARD BOOTH: It is still a possibility, and that was a piece of what he was talking about.

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FRANK PARTNOY: This is another Woody Allen moment—we're in the movie line and we've got the person, the Marshall McLuhan, who actually said all of this and can respond. So I have two quick reactions. One is that the SEC actually makes these sorts of categorical distinctions all the time, at least implicitly. I mean the distinction between mutual funds and hedge funds, for example, which is sort of done by default.

SUSAN NASH: The distinction between mutual funds and hedge funds is not based on substantive distinctions in the nature of the funds, but on the nature of the funds' investors—for example, the number of investors and the investor's financial circumstances. This relates to the point I made earlier—securities regulation has often been calibrated to the sophistication of the investors, a factor that would be discounted by focusing solely on the characteristics of a particular fund.

FRANK PARTNOY: OK, but just to be clear, I think maybe I'd agree with you that the SEC wouldn't do a good job of making that distinction. This is why I mentioned that I want it to be done by the market instead, maybe with standards being supplied by the SEC. But I guess my second point is that the market is already doing this with ETFs. The market is already making this distinction on its own, so I would just encourage you to be open-minded about that, and maybe the regulation should understand that and track what the market is already doing.

RICHARD BOOTH: Why not? Clearly index funds and money market funds are easy to identify. Why not experiment by allowing them to do some of the things that were suggested? That would probably encourage more of those to lower cost.

SUSAN NASH: I think that, at least in terms of disclosure, the Commission has differentiated among types of funds. For example, in the recent portfolio-disclosure rules the Commission adopted, it indicated that money market funds are not required to "push" their portfolio information out to investors at all. Portfolio schedules for money market funds no longer have to be included in the shareholder reports. Instead, they are required to be available upon request. In addition, another big change that was made in those rules was directed largely to index funds. The rules permit all funds to omit their portfolio schedules from their shareholder reports and include only their top fifty holdings, with the full schedule available upon request. Index funds are most likely to use this option and benefit most from the change because they tend to have lengthy portfolio schedules that extend for pages and pages and pages.

And so, I believe that the Commission does, in fact, track market developments. It does this through disclosure rules as exemplified by the portfolio-disclosure rules. The Commission also differentiates its regulatory regime through exemptions that are provided to particular types of funds—exchange-traded funds are a prominent example. The Investment Company Act itself, and the Commission's application of the Act, as well as its disclosure rules, are flexible and recognize differences that develop in the marketplace.

What struck me as provocative in Frank's remarks was the call for the Commission to make an advance decision that there are two categories of funds, and that one type of fund will always get certain treatment and the other type of fund will always get a different type of treatment. I believe, first, that the Commission is not particularly well suited to categorize the fund world in that way and, second, that categorization in this manner would create a regulatory arbitrage situation where sponsors would try to squeeze their funds into the less regulated category. That is very, very different from the Commission taking a hard look at the realities of existing funds and making considered decisions about which aspects of its regulatory regime should apply in particular cases. The Commission makes those sorts of calls regularly.

RICHARD BOOTH: Given that much of what Frank brought up is also familiar to Joe Hardiman—like exchange-traded funds and that sort of thing—I think maybe we'll go to Joe next and see what his view of the future is. Does Frank's scenario hold water, or are investors going to move away from mutual funds into other sorts of arrangements, like traditional brokerage accounts?

JOSEPH HARDIMAN: Let me start out by being a little provocative as well. I'm going to challenge Richard's very first premise, and that is that rational investors diversify. I think he went on to conclude that you must diversify in order to achieve a market rate of return. I would suggest that most highly successful investors are irrational and hence not diversified, but they represent a very small minority. I do want to respond to your question, Richard. I believe that people are moving away from traditional mutual funds and looking for other ways to invest in securities. Frank has pointed out several. The most notable in terms of investment success and assets, have been hedge funds. Until recently they have not been aimed at the small or even midsize investor, but the high net-worth investor. That is beginning to change.

You saw the asset numbers Frank put up there on the right. There are more than 7,000 hedge funds today with more than a trillion dollars in assets. As you take a look at what's happening with hedge funds, they are being sold increasingly through funds of funds by brokers and financial planners to investors with a smaller base of assets. That is a bit troublesome from a suitability perspective. And I think it leads the Commission to conclude—and rightly so—that they have got to take a harder look at how and to whom these funds are being sold.

The other area—exchange-traded funds—represents only about \$175 billion worth of assets, according to the number I saw from August. So they are still a fairly small pool of assets even though they generate a lot of activity. They are increasingly being used by what I would call the traditional investment adviser or the traditional broker in a fee-based separate account, which is replacing the traditional brokerage account where the broker and the firm are paid on a transaction basis. Today close to forty percent of the revenues of brokerage firms are coming from fee-based accounts, and these fee-based accounts are just as the name implies—

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separate accounts. They are constructed to meet the needs of the investor and are built around exchange-traded funds, individual securities, and increasingly for some investors, hedge funds. So this is a growing asset base. No one knows how large it is, but I would suggest that it is probably as large as, if not larger than, hedge funds in terms of assets because the control of a lot of assets is still in the hands of your large financial conglomerates and their brokerage affiliates.

Commenting last on the newest entry and speaking, I think, on behalf of Steve Wallman, you've got online folio investing. Unlike exchange-traded funds, they really do trade online. Steve has probably the most active firm in the business, Folio FN. They vary a bit, as Frank pointed out, from exchange-traded funds in that they have ready-to-go portfolios, which are essentially baskets of securities like exchange-traded funds, but you can modify those baskets by adding or subtracting specific securities to fit your particular need. The baskets adopt a wide range of investment styles, ranging from the major market indices to international investments; aggressive, moderate, and conservative portfolios; social issue funds; environmentally friendly; labor friendly; tobacco free; minority leaders; women leaders; geographic funds; and so on. The construct of a folio can be easily tailored to the individual's investment objectives.

They may be "products" in the description that Frank set forth, but there is also a "service" involved. That service is provided by firms like Folio FN, which provide advice to the individual investor on how to construct their particular folio. So here you have a crossover between so-called "product" on the one side and the "service" on the other. No data exists on how large they are, but I do agree with Frank that they will increasingly be a factor in the whole pool of asset investing that is being made available to the individual investor.

RICHARD BOOTH: Last, but not least, we have Mike DeGeorge, who is going to tell us a little bit about how variable annuities fit into this competitive world. I should note that variable annuities have not been immune to some of the abuses that have come to light with respect to mutual funds.

MIKE DEGEORGE: Richard asked me to speak for a few minutes about variable annuities as potential alternatives to mutual funds. I'm going to assume that everyone here is generally familiar with what a variable annuity is. It is an insurance contract that has an accumulation period where people invest in mutual fundlike portfolios or subaccounts, and also an income period where they take out the accumulated savings, either in a lump sum or over some period of time or for life. Variable annuities differ from mutual funds in several important ways. First, all dividends, interest, and capital gains are tax-deferred in a variable annuity. They're not taxed until withdrawal, at which point they are taxed at ordinary income tax rates.

Second, variable annuities offer a death benefit, which guarantees that if the policyholder dies while still saving for retirement, his or her beneficiaries will receive the greater of the accumulated value of the contract or the money that was

invested. Many annuities go even further and offer enhanced death benefits that lock in investment gains every few years or even every year. And many variable annuities offer what are called "living benefits," which provide principal protection against downside risk during the life of the policyholder. For example, a very popular and recent living benefit guarantees that the owner can systematically withdraw a certain percentage of premiums annually, for example, say seven percent, until the original investment has been completely recovered—again, regardless of actual market performance.

Richard mentioned, I think in a question to Henry, that people insure a lot of their assets but they don't seem to take that same approach when it comes to their retirement assets. The annuity industry believes that insurance of one's retirement assets is a prudent thing. Retirement funds represent some of the most important assets people accumulate. And the protections that annuities provide, the death benefit and the various types of living benefits, can give people insurance against untoward economic consequences, against market downturns, and protect this very important investment.

Now, in the spirit of full disclosure, particularly since we have one of our regulators here, I would, of course, have to note that variable annuities do generally have higher fees and charges than mutual funds. And early withdrawals may be subject to surrender fees and a ten percent federal tax penalty if withdrawals are made before age 59 and a half.

We happen to agree with Richard's point that diversification is important. Variable annuities offer a number of services that help people diversify. They offer dollar-cost-averaging services when one purchases an annuity with a lump sum. They offer investment diversification in that they make available to the investor a variety of portfolios to choose from—from stock funds to bond funds to international funds to balanced funds to a money market fund, and even a general fixed account.

The average variable annuity in the year 2003 offered thirty-eight different fund options. That was the average number of options available for a variable annuity last year, so there is a diversification built into the product. Most contracts also offer asset-allocation or portfolio-optimization programs to further help people diversify, and automatic asset-rebalancing programs to help them keep that diversification from year to year.

Probably the most important feature, or the feature that most distinguishes variable annuities from mutual funds and other investments, is the ability to annuitize the contract and elect payments that are guaranteed to continue for the rest of the policyholder's life, or for the life of the policyholder and his or her spouse, if that option is elected, no matter how long that is. The industry feels that this feature has become increasingly important as the chances of living longer increase because of medical advances, and other forms and sources of lifetime income, such as defined-benefit plans and Social Security, become more uncertain. These factors can com-

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bine to raise a risk for many people that they may run out of money in retirement or have to cut back significantly on their standard of living.

This slide illustrates the longevity risk that retirees are facing. As you'll see from the slide, for a married couple age 65, there's a seventy-percent chance that at least one will be alive at age 85, a forty-five-percent chance one will be alive at age 90, and an eighteen-percent chance at age 95. So, as a result, in order to ensure that they won't run out of money during their retirement years, people have to plan to make their assets last, not just to their life expectancy, but well beyond their life expectancy.

This slide illustrates again the decline in defined-benefit plans. According to the Department of Labor, today fewer than 25 million workers are covered by a traditional employer-sponsored, defined-benefit pension plan where they would receive a lifetime pension based on their salary and their years of service with the company.

What all this means, we believe, is that more and more people are responsible to create their own retirement. Sophisticated Monte Carlo simulations that evaluate thousands of different portfolio outcomes over time can analyze the probability that a given retirement nest egg will be able to meet somebody's retirement needs.

This slide was prepared by Ibbotson and Associates in 2003. They took a portfolio of \$1 million that was divided equally between stocks and bonds, and they analyzed whether that portfolio would be able to fund a \$65,000 annual income, adjusted for inflation, starting at age 65. It analyzed various outcomes, and using an average return of 8.8% a year and a 3.1% inflation rate, the model found that, with a systematic withdrawal plan, there was a 10% chance that the portfolio of a million dollars would be unable to provide the \$65,000 retirement need by age 79.

There was a twenty-five-percent chance that there would be a shortfall by age 83 and a fifty-percent chance that the portfolio would be out of money by age 88. That creates quite a risk that many people probably don't want to have to face. Ibbotson also did a study assuming that the portfolio was split between a payout annuity and traditional mutual funds. They assumed that one-half of the portfolio, or \$500,000, would be put into an immediate payout variable annuity and the rest would remain in a fifty-percent bond-stock mix of mutual funds. The initial payments from the immediate variable annuity were \$33,000. This would require that some additional funds be systematically withdrawn from the nonannuitized portion in order to meet the \$65,000 annual income need. And Ibbotson found that with this type of mix there was a ten-percent chance that the annual inflation-adjusted payments would have fallen to about \$30,000 by age 80 as the funds from the nonannuitized account were depleted, so only the variable income payments remained.

There was a twenty-five-percent chance that the combination would be able to meet the income needs through age 85, at which time the nonannuitized funds would again be depleted and the variable-annuity payments would be about \$40,000 per year. And finally, they found that there was a fifty-percent chance that

the combination of annuity income payments and traditional systematic withdrawal payments would be able to provide the needed income without interruption through the life of the retiree. So, as you can see from these slides, converting a portion of the retirement nest egg into a lifetime stream of income through the use of a payout annuity or deferred annuity that is annuitized at retirement can provide an effective hedge against longevity risk and help investors achieve a sustainable income throughout retirement, regardless of how long they live.

In closing, I don't have a quote from Woody Allen, but I do have one from Ben Stein. NAVA has been involved for three years now with an initiative called National Retirement Planning Week, to help raise Americans' awareness of the need to plan comprehensively for retirement. Ben Stein is our current spokesperson for that program. I have heard Ben Stein say that growing old stinks, but growing old and running out of money really stinks. [laughter] I think there is some truth to that, and we think that the use of an annuity, as part of one's overall comprehensive retirement plan, can help people avoid that second scenario.

RICHARD BOOTH: Thank you. We've got time for a few questions.

QUESTION: This panel was very unusual. It turned toward investor-choice kinds of issues, whereas I think the earlier panels were much more focused on issues of protection, investor protection, and the need for prudential regulation. I remember a phrase earlier this morning—funds are not bought; they're sold. I think a lot of people regard variable annuities as very expensive insurance products. And regarding ETFs, we have a product that was designed for institutional investors. It is really unusual that individual investors would have a need for intraday liquidity that institutional investors need. In moving away from investor choice or moving away from investor-protection issues, don't we expose investors to serious risks that they are going to make terrible choices in the marketplace?

SUSAN NASH: I believe that investor protection is key, regardless of the particular investment involved. Mutual funds offer some significant pluses: diversification and, in contrast with folios, management by a professional manager who makes the investment decisions. Of course, that brings with it some potential downsides. With folios, you control your own tax consequences. You can tailor the investment to meet your particular needs. Every investment has its pluses and minuses. Mutual funds have pluses and minuses, as do alternative investments.

One of the keys to investor protection is to figure out how to get useful, understandable information to investors. That's not an easy task. On one side lurks the danger of not providing information that someone wants and needs. On the other side lurks the danger of information overload. One issue that has not received enough consideration is presentation of information. How do you go about providing disclosures in a manner that entices investors to read them? In the end, regardless of the particular security involved, you have to be concerned about investor protection and you have to be concerned about investor understanding.

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One factor that always has to be borne in mind is the degree to which investments are sold and not bought. The prime source of information for an investor may well be a broker or other financial adviser and not a prospectus. In practice, many investors rely on the assistance of investment professionals and not on written documents. That is certainly a point that a well-designed regulatory system must address.

RICHARD BOOTH: Any further comments? If not, I would like to thank everyone for their participation today, and we are adjourned.