THE JOURNAL OF
INVESTMENT CONSULTING

A reprinted article from Volume 7, Number 1, 2004

Irrational Exuberance and Behavioral Finance: A Conversation with Robert J. Shiller, PhD, about Integrating Investing and the Social Sciences

INVESTMENTS & WEALTH INSTITUTE® formerly IMCA


Robert J. Shiller

In March 2000, Robert J. Shiller, Ph.D., published *Irrational Exuberance*, in which he analyzed the stock market boom that dominated the last two decades of the twentieth century and warned about excessive market volatility. His book could not have been timelier as, within weeks, declining stock prices signaled the end of the longest bull market in U.S. history. *Irrational Exuberance*, which won the Commonfund Prize for best contribution to endowment management research in 2000, also became a *New York Times* nonfiction bestseller. Dr. Shiller, who is the Stanley B. Resor Professor of Economics at Yale University, is a leading proponent of behavioral finance, which looks for ways to apply the lessons learned in various academic disciplines—particularly psychology, but also history and sociology—to economics and financial markets. His latest book, *The New Financial Order: Risk in the 21st Century,* published in 2003, proposes a new risk-management infrastructure that would foster financial innovations to protect against risks such as loss of employment or real-estate value due to economic or technologic changes, just as today's insurance protects against catastrophic risks. Dr. Shiller is at work on the second edition of *Irrational Exuberance*, scheduled for publication in 2005.

In his article "From Efficient Markets Theory to Behavioral Finance," which appeared in the Winter 2003 issue of the *Journal of Economic Perspectives*, Dr. Shiller discusses how the discovery of anomalies during the 1980s and the more recent evidence of excessive volatility in returns called into question the basic underpinnings of the efficient markets theory and led to the rise of behavioral finance. In the following interview, Dr. Shiller talks with members of the *Journal of Investment Consulting*'s Editorial Advisory Board about the field of behavioral finance, its implications for consultants and advisers, and his thoughts about the future. Taking part in the discussion were Edward Baker, the *Journal*'s editor-in-chief, of Alliance Capital Ltd., London and San Francisco; Tony Kao of General Motors Investment Management, New York; Matthew Morey of Pace University, New York; and Meir Statman of Santa Clara University, California. This interview is the second in the *Journal*'s Masters Series, which presents topical discussions with leading experts and visionaries in finance, economics, and investments.

IRRATIONAL EXUBERANCE AND BEHAVIORAL FINANCE

A Conversation with Robert J. Shiller, Ph.D., about Integrating Investing and the Social Sciences

Ed Baker: Thank you for accepting our invitation to participate in the Masters Series. Your recent paper in the *Journal of Economic Perspectives* was an excellent read and provided a great deal of insight into the origins of behavioral finance. Meir, you wanted to start off with some questions about this.

Meir Statman: I don't know if you remember your visit to Santa Clara University in the mid-1980s, back when you were still under attack for your views on excess volatility. It would be interesting to get a sense of what the field of behavioral finance was like in those early days.

Robert Shiller: I do remember that visit. It was the first time that I realized there were a number of allies around, although we seemed like a rather beleaguered small group at the time. You, Daniel Kahneman, Amos Tversky, Richard Thaler, Werner De Bondt…. It wasn't until the late 1980s that Dick Thaler began organizing conferences focused on behavioral finance, so it's interesting to see how the whole field—and the related research—has grown.

Ed Baker: Was the problem then that people didn't want to look at finance as a social science?

Robert Shiller: That's always the problem. There are all sorts of pressures operating on scholars. One is that you become married to a methodology. You spend years practicing and perfecting something, and then you realize that maybe you should have gotten your Ph.D. in psychology or another field, but it's too late. Students in finance or economics may feel limited by the approach they have been taught, even though they may find it interesting to move to a different approach, because they don't have the years of training or expertise. The way academia works is that you're rewarded for being on the frontier, so there's always a tendency to try to stay the course, to continue doing what you know well, because that's the way you'll get out to the frontier. The problem is that the interesting ideas are usually off the main course, out somewhere that no one has prepared for. It has been a challenge to marry finance and psychology because it's hard to be on the frontier in both areas, and that's what behavioral finance requires.

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Matt Morey: I'd like to ask a question related to your recent article in the *Journal of Economic Perspectives* as well as some of the observations you made in *Irrational Exuberance*. One argument made in support of the efficient markets theory is that no investor can consistently beat the market. The preponderance of research on mutual funds concludes that they cannot outperform their respective indexes on a consistent basis. How do you reconcile the evidence on the mutual fund front with the idea that the markets are inefficient?

Robert Shiller: The first thing to establish is that I believe market efficiency is a half-truth. The way I view it is that students like to be told that there's a simple, cut-and-dried, easy way to think about the world, so there's a tendency for scholars to go to one extreme or the other to please their students. One way to go is to say that markets are completely efficient, and you can tell a satisfying story, one with lots of examples about how presumed inefficiencies turned out to be wrong. The other extreme would be to say that market efficiency is totally wrong. The challenge is to find where the line is. Obviously, the markets are not completely efficient or completely inefficient, either.

When you look at mutual funds, that's one group of professional investors. It's not the same group as hedge funds or university endowments. Mutual funds are a specific group with a certain homogeneity, since the funds communicate with one another and people move among them. The most telling studies about mutual funds are the ones about persistence of returns. If the markets are inefficient, it would be reasonable to assume that even though you might not be able to predict which mutual fund is going to perform better than others, some of them ought to be consistently doing better than others. If there are smart managers at a certain fund, you would think that the returns should be persistently higher at that fund. However, the literature has found only weak evidence of persistence—there is some, but not very much.

I suppose the lack of persistence reflects a number of issues. It does suggest that, to some extent, markets are efficient. However, lack of persistence also reflects the fact that there's a great deal of randomness in returns so that even a smart investor can't beat the market all the time, and so persistence won't be that strong. It's partly because mutual funds learn from one another and adapt, so if one fund is a success, other funds start doing the same thing. It's partly because a successful mutual fund tends to bring in more investors and, therefore, more assets, and it's harder to invest well when the fund gets larger. That's just part of the normal life cycle. In addition, in most cases, mutual funds may not tend to attract the most talented investment managers because the culture is oriented more to sales than profits. A more talented investment manager might prefer to go to a hedge fund, where there's more

freedom and generally better incentives and compensation. All these things combine together to explain why persistence of returns among mutual funds is not stronger.

Matt Morey: One thing you discuss is that no one can say exactly when the market is going to decline, just that there appears to be excessive enthusiasm or exuberance, but it's very difficult to determine the timing when the market's going to go up or down. As a result, it's difficult for these funds to consistently beat the indexes. I suppose that's one rationale for combining these two ideas: the concept of stock market bubbles and, on the other hand, the literature showing very little evidence of persistence.

Robert Shiller: Yes, that's right. I should point out that when I wrote *Irrational Exuberance*, I didn't really intend that investors should be trying to time the market all the time or making a big issue of it. My intent was merely to remark on the extraordinary time in which we were living and to call attention to the fact that there are definite times when investors ought to pay attention to overpricing or underpricing.

Tony Kao: In your article, you also spent some time discussing short sales constraints. Could you comment on these constraints and their role as contributors to market inefficiency? Do you think the market would be efficient if these constraints didn't exist?

Robert Shiller: Short sale constraints, either the institutional problems or just the psychological problems with selling short, are an important reason why we see some of the most extreme anomalies in finance. There are cases where small firms become extraordinarily overpriced and very hard to short. In some sense, this is not really a sign of inefficiency according to the broad definition, since it becomes impossible for the smart money, or contrarian investors, to short the shares to take advantage of the inefficiency. However, in a wider sense, it's not just the impossibility of shorting but the inhibitions against shorting that produce smaller and perhaps less dramatic inefficiencies. Most people would prefer not to short a share that appears somewhat overpriced, given the fact that a short position has an unlimited loss potential and, in our investing culture, that's considered a rather risky thing to do. Also, margin calls are unpleasant and force unpleasant decisions, so most investors stay away from short positions altogether, never take them. So a stock can often be moderately overpriced and not shorted; that is, shorting is not enough to overcome the overpricing. That's an important factor that generates some of our apparent anomalies.

Ed Baker: Has the social sciences side of the community actually tried to test the aversion to short selling?

Robert Shiller: A number of papers have been written on the subject of determining whether the predictions about market inefficiency related to short sales constraints hold up. For example, Chen, Hong, and Stein wrote a paper[1] in which they showed that breadth of ownership positively predicts returns. They didn't actually measure short sale restrictions, but they believed that concentrated ownership suggests that a few people may have bid the price up, and others are inhibited from correcting it. Anna Scherbina had another version[2] showing that disagreement among analysts' opinions served as a measure of the relevance of short sale constraints; that is, if there's a lot of disagreement, it means that some people are very strong on the stock, and presumably they bid the price up. Others, if they're reluctant to short the stock, let that happen. So her finding was that this disagreement also predicts returns. This is the best evidence of which I'm aware that suggests the importance of short sale aversion, or restrictions, in actually predicting returns in the market.

Tony Kao: Do you think that hedge funds, which normally are not subject to short sale constraints either because of lack of regulation or investors' preference, take full advantage of this, and how much does this contribute to their returns?

Robert Shiller: I don't really know the answer to that question, but I can say that hedge funds are changing in composition all the time. We're seeing an explosion in the number of hedge funds, and the newer ones may not be as high quality as the older ones. Therefore, any conclusions drawn from studies of hedge funds in years past would not necessarily apply well today. Hedge funds

appear to be becoming more sales-oriented than they were in the past, because there's a huge clamor to invest in them. They're also growing in size, which means it's harder for them to find the kind of niche investments they once found. So it's very difficult to predict where hedge funds are going in the future because the whole phenomenon is changing so greatly through time.

But let's say you want to pick a hedge fund in which to invest. Where I think the market efficiency theory goes wrong is that I really believe that people who are very intelligent—in a practical sense—and willing to work hard will probably, in the long run, earn extra returns. So one way an investor might use his or her intelligence and willingness to work hard would be to sort through all possible hedge funds. You can't just pick anything that calls itself a hedge fund—you have to look at the skills and talents of the people who are running it. Investors with better judgment ought to be able to select the better hedge funds. The people whom others point to as great or successful investors are considered such because they are smart. While that's viewed as inconsistent with market efficiency, in a broader sense market efficiency is still right because if you're average, you're likely to have average investment results. Just following some simple rule of thumb such as "Pick any hedge fund" is not going to make you rich.

MEIR STATMAN: Do you follow your own advice and, for example, try to sort through all the possible hedge funds?

ROBERT SHILLER: Actually, there's a TIAA-CREF ad with me where the tagline is, "Dr. Shiller entrusts his money to TIAA-CREF because he's too busy." And, in fact, that's true. There's also a common saying that investment managers spend so much time managing institutional portfolios that they have little time left to manage their own. My own investments are heavily tilted toward some companies that I created with my student Allan Weiss and Chip [Karl] Case of Wellesley College, the first of which was Case Shiller Weiss, Inc., a real estate information firm. We sold that firm two years ago and created a second company called Macro Securities Research. We've also just started a small boutique investment bank called Macro Financial, to help create a new kind of security that Allan Weiss thought up and that we developed together. Since my attention is focused on this, my portfolio is just basically diversified. I don't have time to do what I just said; that is, I don't have time to spend a lot of effort picking the right hedge fund. Maybe a few years down the road I will, but I don't believe I would be very successful at it unless I were willing to put in a great deal of time. That's another element that explains investment success. I realize I'm repeating myself, but investment success takes practical intelligence plus the willingness, even eagerness, to put in hard work—as well as the time to do that.

ED BAKER: I have another question related to hedge funds. Most investors with a diversified portfolio still have a bias toward long-only investments, mostly mutual funds. Do you think investors should be using hedge funds more than they do and get away from this long-only bias?

ROBERT SHILLER: Hedge funds are a very interesting investment vehicle, and yes, there should probably be more attention paid to short positions. One of the offerings that my company, Macro Securities Research, is trying to create is a security that does take short positions. We want to create securities that trade on the stock market, but that take short positions in the stock market or in other markets. There are already exchange traded funds (ETFs), and you can short ETFs, but that's not the same thing as buying an ETF that's short, or a bear ETF. There are also bear funds, but we think this new security will offer some improvements on those. We'd like to make it easier for people to take short positions, not only in the stock market but in other markets such as real estate. Many investors are very overexposed to the real estate in a single city. This is a very common error—well, not exactly an error, since people are forced into it because there's no easy way to short real estate in their city. This is something we're working on, and I'd like to see it happen. So the answer to your question is yes, I think short positions should be an important part of one's overall investment strategy, much more commonly than they are now.

MEIR STATMAN: Could you tell a little more about what you're doing at Macro Securities Research in creating

new securities and perhaps relate it to unlimited loss potential, which is really what gets in the way of taking short positions?

ROBERT SHILLER: I have a Web site called newfinancialorder.com, and I try to list some of the more exciting things that are going on in finance today. With the proliferation of electronic markets, a number of new vehicles are being traded. However, our firm is trying to innovate in a fundamental way that's perhaps a little different. The motivation for our company is largely based on behavioral finance and the way investors actually operate, noting that not much hedging of risk takes place now. We wanted to create hedging vehicles that were comfortable, user-friendly, and based on what we know about human behavior. So we thought it would be very useful to create securities that take short—as well as long—positions in the major risks that people face, like—as I mentioned earlier—real estate. These vehicles should ideally have a familiar and easy form; that is, they should be securities traded on stock exchanges, rather than options or futures, because for the average investor, options and futures are already intimidating.

Suppose, for example, you live in Los Angeles, which is among the cities that seem to be going through a current real estate bubble, and you've bought a house, but you're worried that the bubble could burst, as it did in the early 1990s. It would be very rational to want to take some type of hedge. We thought that one of the simplest ways to accomplish this would basically be to buy a long-lived security designed to move opposite Los Angeles real estate prices. You would then simply put this in your portfolio. Behavioral finance has shown that people don't adjust their portfolios very often, but then they don't sell their houses that often either. Buying this security would be an easy decision that would hedge you over the years. While it's difficult to get things like this started, we think it makes good sense and that eventually people will be using these kinds of tools. Incidentally, we now have a deal with the American Stock Exchange to create some of these securities. We're working with the same people who created ETFs in the early 1990s, and we also have a specialist firm that's agreed to make a market, so I'm hopeful that we'll be able to create these within a year or so.

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ED BAKER: So this is a bit like insurance for the assets you own in your portfolio?

ROBERT SHILLER: Yes, although insurance is another user-friendly vehicle that people are accustomed to buying. So it helps to retain those familiar forms. In *The New Financial Order*, I talk about adapting insurance contracts to make them broader in the risks they cover.

ED BAKER: Do you think that in addition to the desire to avoid unlimited liability, investors also have a preference for actually having something in their portfolios, that is, knowing they own an asset, when they invest?

ROBERT SHILLER: That's right. If you look at the history of insurance, in the nineteenth century they found that insurance is much more saleable if it has a cash value, if it can be described as an investment, rather than just simple term insurance. It's another example that illustrates the idea. That's what we wanted to accomplish at our firm as well: create a security that sits in your portfolio, pays a dividend, and looks like a stock but is designed to hedge risk. This is where behavioral finance is such an important field. As I argued in *The New Financial Order*, the world is changing rapidly, and many new financial institutions are going to be created in the next ten to

twenty years. Behavioral finance helps us to understand how to make these things work. For example, Meir, you and Hersh Shefrin wrote some illuminating things about the reasons people hold options.[3] I've been rereading your paper, trying to figure out why people don't do more of what they really ought to be doing. All of this work will ultimately contribute to better financial institutions in the future. Auto manufacturers use "human factors" engineering to design a car that will not only work for the real people who drive it but also make it less vulnerable to human error. The same principle applies to financial institutions. Again, this is why behavioral finance is such an important field. It's not important primarily because it enables us to beat the market but because it will enable us to improve markets and make them more functional for our society.

Ed Baker: Our journal's main constituency is the investment consultant community, the people who advise others on how to better structure portfolios, at both the institutional and individual levels. What implications do you think behavioral finance has for them? Is it a useful area for consultants to explore?

Robert Shiller: Yes, absolutely. Particularly for the individual investor, the role a consultant takes on is a little bit like a psychologist and a little bit like a social worker—you're giving people advice about their lives. I know it centers around their financial decisions, but an investment adviser has a very important public trust. So expanding the adviser's horizons to think about human psychology is fundamental. As a consultant, you may be giving very good advice, but it may not be taken if you don't understand the underlying human behavior. People can be very resistant to good advice, and you have to understand why.

Ed Baker: Do you think it's important that consultants learn how to protect investors from themselves, or is there another role they should be playing?

Robert Shiller: Well, of course, consultants are protecting investors from other shenanigans out there too—fraud and market manipulations, among other things. Financial markets are inherently difficult to understand. You'd like to give analogies—to say that predicting the markets is like, say, predicting the seasons, something where we have a scientific basis for making predictions. The problem with the markets is that they are just like people, and individual investors can easily get confused. A common error underlies herd behavior, and that's belief in the statement "If most people are saying something, it's probably right." While that's probably true for everyday life, it's not true for investing, because when everyone is saying the same thing, it may be driving the market. That idea may be obvious to you and me, but it's one of the errors characteristic of individual investors. So they need someone who will stop them from running with the pack.

Matt Morey: Much of your work makes the point that, at certain times, investing for the long term may not necessarily be the best choice. Yet one of the things that frequently comes out in discussions with financial advisers is the importance of investing for the long haul, riding out the ups and downs of the market. How would you answer someone who says, "Stocks are best for the long run"?

Robert Shiller: There's always some element of truth in all these different stories; it's just a question of where we're overstating the matter. One of the reasons people are urged to invest for the long run is to caution them about overtrading or churning. That's elementary good advice. You can use up your wealth in trading commissions if you trade too often. The problem is knowing when to draw the line and get out. The answer can be complex—that's another reason we need investment consultants.

Meir Statman: Would you suggest that advisers, or investors themselves, use price/earnings (P/E) ratios or dividend yields, for example, to determine when it's time to get out of the market, even if it's infrequently? Or is that more likely to lead them astray than to lead them right?

Robert Shiller: Well, a very high P/E ratio is a sign of trouble. So people should look at that, and obviously many investors do. But let's go back to 1999, when you

had dot-com stocks trading at infinite P/E ratios—the various ratios were all out of line. This is an example of when an investment adviser can earn his or her fees by warning people away from those mistakes.

Meir Statman: Or you could lose a client because you told him that in 1998, rather than 1999.

Robert Shiller: It's much more comfortable being a tenured professor than an investment adviser. Being an adviser is a conflictual situation: You can be giving the right advice and have the client disagree with you or ignore you—or you can be giving the right advice and still get fired!

Matt Morey: That goes back to my earlier question. How can you decide the right time to get in and out of the market, rather than just staying in for the long haul? I think most investors get confused. They hear the story that the market's very overvalued, then they also hear that the market continues to go up.

Robert Shiller: What it comes down to is that a buy-and-hold strategy may prove to be the right strategy, but thinking about it carefully is always helpful. For some people, buying a home in Los Angeles now, for example, would not be a wise decision because it is a risky situation, and they have to understand that they might be putting a huge part of their portfolio in a risky investment. It all depends on their life circumstances. Investing is complicated, and there are mistakes investors can make. It's not just failing to trade often enough, or trading too much. People also tend not to diversify their portfolios. Putting all of your money into an expensive home is holding a very undiversified portfolio. If people take the time to think these things through with the help of an adviser, they might choose to live in a more modest home, for example, as a way of diversifying. We definitely need advisers who will spend time with people and help them think about their individual circumstances.

Tony Kao: Speaking of bubbles, you've talked about the idea of selling at a high point when everyone else is still buying or buying in at a low when everyone else is selling. However, in terms of selecting an investment or searching for an investment manager, very few people would invest in a mutual fund with declining returns or hire a manager with poor performance in anticipation of a turnaround. Can you explain this from a behavioral finance viewpoint?

Robert Shiller: Well, most investors are not reading finance journals. They have more of a fly-by-the-seat-of your-pants way of thinking, in which it seems very clear to them that you should pull out of losing funds or stocks and go into the winning ones. People are guided largely by intuition, and it's sometimes shocking the way they think. I've had people tell me that they have a large part of their portfolio invested in a high-P/E stock, and when I asked if they're worried, they say no, because they're "watching it"—and they're ready to pull out at any time.

Ed Baker: In your article, you also mentioned some work that you've been involved with that shows a tendency for the prices of individual stocks to be related to their fundamental characteristics. Do you think this supports the view that a disciplined approach to long-term investing focused on fundamentals—an approach that ties fundamentals to prices—should pay off?

Robert Shiller: I guess the answer is yes, in the long run. In a paper I wrote with Jeeman Jung,[4] we quoted Paul Samuelson's dictum that the markets are micro efficient but macro inefficient. We found that, to some extent, this is true. The stock market itself seems to be mainly driven by fashions and fads. However, when you look at individual stocks, it's a different story, because individual stocks are much more diverse, and some of them can be predicted to perform well over the long run. Their earnings will likely go up in the next decade, for example. Others can be predicted to perform poorly. People who look at a company and really think about it ought to be able to outguess others on how the company's course will run.

Meir Statman: Can you explain the apparent dichotomy of having individual stocks that can be priced reasonably well relative to one another and a market, as a whole, that can deviate so far from its value?

Robert Shiller: The answer is that individual stocks have much more volatile and predictable earnings. The earnings for the aggregate stock market are much more calm and not easy to predict very far out. That's the difference. I can say, for example, that the baby-boom generation will soon be retiring and ten years from now there will be increased demand for retirement homes, so that would be a good place to invest money, assuming other factors confirm the investment. That kind of reasoning appears to be able to get ahead of the market, if you do it in a subtle way. However, if you're thinking about predicting how the entire stock market will move, there's no basis for that sort of reasoning. Who knows what earnings are going to do in ten years? There just aren't the opportunities to use your intellect to predict aggregate stock market earnings. For one thing, they aren't variable enough; aggregate earnings have followed a fairly smooth trend for the past 100 years, growing at a real rate of about 2 percent a year.

Meir Statman: It still seems like a puzzling idea because, after all, the market is simply the sum of all the stocks. So if you can get the stocks right, why can't you get the sum right?

It appears that people are more complex. It's not as simple as having timid people and bold people. Some people will be risk averse in one circumstance and not so averse in another. It's oversimplifying human nature to think we can put people into those two categories as the only psychological measure we use.
—Robert Shiller

Robert Shiller: Well, first of all, people aren't getting the stocks right either, but the point is that the earnings for the whole market average out, so you're not left with much aggregate variation in earnings. All you're left with is the noise.

Ed Baker: I'd like to ask a few questions about risk aversion. It seems to me that's one area where the traditional modeling approach tried to incorporate some behavioral elements. What does behavioral finance tell us about risk aversion? Can it help us gain better insights?

Robert Shiller: One idea that was essentially enshrined with the invention of the capital asset pricing model was that different people have different risk tolerances, or risk aversions. It worked out very well in that mathematical model to assume that the only parameter, or behavioral element, along which people differ is in their tolerance for risk. This worked beautifully, giving us the famous efficient portfolio frontier and the tangency line. People simply array themselves along this line depending on their risk tolerances, and it makes a beautiful story. The problem is that risk aversion is hardly the only relevant parameter. Incidentally, many investment advisers would try first to elicit your risk tolerance to decide whether to put you in an aggressive growth portfolio or a conservative income portfolio. However, studies that tried to find consistent differences in risk tolerance across individuals, or at least within an age group, were unable to find differences that were highly consistent from one measure to another. It appears that people are more complex. It's not as simple as having timid people and bold people. Some people will be risk averse in one circumstance and not so averse in another. It's oversimplifying human nature to think we can put people into those two categories as the only psychological measure we use.

People also differ in other ways. There was an interesting paper[5] by Ameriks, Caplin, and Leahy about the propensity to plan. They found that one major difference across individuals is that some people like to plan their future, and others find planning unpleasant and simply avoid doing it. It's not that this latter group is more risk tolerant when it comes to their portfolios; it's that they're not even paying attention! Ameriks and his co-authors found that those who are planners tend to do very well in terms of having more money when it comes to retirement. These are the people who keep a file folder, look at their portfolios regularly and know where they're invested, keep up with financial news, and consider all the contingencies. So there's an impor-

tant personality distinction. Those who are advising or consulting with individual investors have to recognize that these personality differences are really the difference between success and failure.

Ed Baker: So have you concluded that risk aversion is a useless notion?

Robert Shiller: No, it's not useless, but much of it is circumstantial. It depends on age, for one thing. Young people can take on better risk with their investment portfolios because it represents a smaller part of the entire portfolio with human capital added. Other life circumstances might also affect a person's risk tolerance. However, the concept that some personality types are consistently more risk tolerant than others is not as strong an idea as people commonly think.

Ed Baker: We do see moments in time when investors seem to be more comfortable taking risk, and other moments when they're very uncomfortable. In times of heightened geopolitical risk, for example, we see money flowing into U.S. Treasuries, and then at other times, investors will be flocking to emerging markets.

After a stock market decline, people may perceive more risk than before when, in fact, the decline may have taken some of the risk out of the market. I haven't quantified this, but I believe risk perceptions probably move around more than risk preferences do.
—Robert Shiller

Robert Shiller: What you're talking about here is perceived risk, rather than risk preferences. There are times when people *think* we're living in a riskier world. After September 11th, for example, people's perceptions of risk went way up.

Ed Baker: So you're saying that they're not more risk averse during those times—they just think there's more risk?

Robert Shiller: That's right. After a stock market decline, people may perceive more risk than before when, in fact, the decline may have taken some of the risk out of the market. I haven't quantified this, but I believe risk perceptions probably move around more than risk preferences do.

Meir Statman: Speaking of risk, can you comment on that old observation by Friedman and Savage[6] that people who buy insurance also buy lottery tickets, despite the apparent inconsistency of that behavior?

Robert Shiller: This again points to the complexity of human nature. The academic theory that people are maximizing expected utility doesn't really have much support from psychology. What economists want is a theoretical framework with which they can understand all of these economic phenomena, so there's a natural impulse for economic theorists to try to produce something elegant and rational. Friedman and Savage attempted to put these two phenomena—buying insurance, which is risk-averse behavior, and buying lottery tickets, which is risk-seeking—into the expected utility framework, but I don't think it worked. The simplest explanation for the reason people buy lottery tickets and at the same time buy insurance involves prospect theory. Evidence shows that in making economic decisions, people are easily influenced by the context and ambience that accompany the decision problem. People have a tendency to exaggerate very small probabilities if their attention is drawn to them. Even though the probability of winning the lottery may be smaller than the probability of being struck by lightning, people don't see it that way because the threat of lightning is just not salient to them. On the other hand, the lottery ticket is presented in such a way that the small probability of winning becomes salient and feeds people's imaginations. I think this is closer to the correct answer to why people buy both insurance and lottery tickets. At the stage in his career when Friedman first made his observation, his mission was to set the course for economic theory. I

admire Milton Friedman very much, but I've come to believe that his efforts to encourage economists to proceed with expected utility models was probably misleading rather than constructive.

Meir Statman: Looking ahead to the future, can you speculate on what financial journals will look like in ten years?

Robert Shiller: The field of behavioral finance has a much stronger presence now, and it will be even stronger in another ten years. I also think we'll see a great deal of financial innovation in the next ten years, and this will generate numerous interesting questions for scholars to work on. Just as in the early 1970s when traded options got their start and the early 1980s when financial futures started, I expect to see innovations like those continue. When that happens, it's going to take a period of time to understand them, and we should see many articles to help us in that area.

Ed Baker: Any final thoughts about what you'll be doing in the future, any work that you can share with us?

Robert Shiller: I'm currently working on a second edition of *Irrational Exuberance* that will come out in 2005, five years after the first book, in which I look at the stock market volatility of the 1980s and 1990s with the insights gained over five additional years.

Ed Baker: Have you changed your views at all over that time?

Robert Shiller: Well, yes, I don't think the stock market is as overpriced. It's still overpriced, but not nearly as dramatically as it was in 2000. Earnings are up, and prices are down. A lot of the irrational exuberance has shifted to the real estate market, at least in certain cities. The second edition of the book is an attempt to add a little more perspective. It's five years later, so I view things a little differently. However, the first edition was basically about behavioral finance and the insights we had about the market at that time, and much of that hasn't changed. I'm also working on a book with George Ackerlof [the 2001 Nobel Laureate in Economics] entitled *Behavioral Macroeconomics*, which will be a book of readings. The field of macroeconomics has been less affected by psychology than the field of finance has, but it really deserves just as much input. What's driving the economy as a whole, what's moving the unemployment rate, GDP, etc., is substantially irrational as well. Understanding the psychological foundation of human behavior in financial markets can facilitate the formulation of macroeconomic policy and the development of new financial institutions.

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—Robert Shiller

Ed Baker: Since consumer demand is the major component of U.S. economic activity, that alone suggests that psychology should have a large role in explaining macroeconomic phenomena.

Robert Shiller: The problem with economics is that it's very difficult to compartmentalize things. Finance is fundamentally related to macroeconomics, so understanding a speculative bubble in the stock market involves feedback not just from financial variables, but from macroeconomic variables as well. Ultimately, it feeds into people's views of themselves and their relationships with others—it's a social phenomenon that requires all the different aspects of social science. I view behavioral finance as one part of an integration of all the social sciences. People who are interested in behavioral finance tend to be aware of the compartmentalization of our disciplines and of the costs that entails. I don't think of behavioral finance as a niche movement; I think of it

as populated by people who want to be aware of and understand the broader picture. As such, behavioral finance needs to be integrated into the social sciences at large.

ED BAKER: You've given us some very interesting ideas to consider. We look forward to seeing the new edition of your book and following your work in the future.

Dr. Robert J. Shiller is also affiliated with the Cowles Foundation and the International Center for Finance at Yale University. He is a research associate at the National Bureau of Economic Research. Dr. Shiller was cofounder of Case Shiller Weiss, Inc., an economics research and information firm, and Macro Securities Research LLC in Cambridge, Mass., which promotes the securitization of unusual risks. In addition to the Commonfund Prize for Irrational Exuberance*, Dr. Shiller received the Paul A. Samuelson Award for his book* Macro Markets: Creating Institutions for Managing Society's Largest Economic Risks *in 1996, and he won the Financial Times/getAbstract Award and the Wilmott Prize for his book* The New Financial Order

ENDNOTES

1. Joseph Chen, Harrison Hong, and Jeremy C. Stein, "Breadth of Ownership and Stock Returns" (Stanford University, 2000).
2. Anna Scherbina, "Stock Prices and Differences in Opinion: Empirical Evidence That Prices Reflect Optimism" (Northwestern University, 2000).
3. Meir Statman and Hersh Shefrin, "Behavioral Aspects of the Design and Marketing of Financial Products," *Financial Management* 22 (summer 1993): 123–134.
4. Jeeman Jung and Robert J. Shiller, "One Simple Test of Samuelson's Dictum for the Stock Market" (NBER Working Paper No. W9348, 2002), forthcoming *Economic Inquiry*.
5. John Ameriks, Andrew Caplin, and John V. Leahy, "Wealth Accumulation and the Propensity to Plan" (NBER Working Paper No. W8920, 2002).
6. Milton Friedman and Leonard J. Savage, "The Utility Analysis of Choices Involving Risk," *Journal of Political Economy* 56 (1948): 279.

INVESTMENTS & WEALTH INSTITUTE®
formerly **IMCA**

5619 DTC Parkway, Suite 500
Greenwood Village, CO 80111
Phone: +1 303-770-3377
Fax: +1 303-770-1812
www.investmentsandwealth.org