

Scenario Learning: A Powerful Tool For the 21st Century Planner

by **Jeff Ellis, Ph.D., Steve Feinstein, Ph.D., and Dennis Stearns, CFP, ChFC**

Dr. Ellis teaches strategic management in the Graduate and Executive schools at Babson College in Boston, Massachusetts. He is a leading scenario learning consultant.

Dr. Feinstein teaches finance at Babson College's Graduate school and is a former Federal Reserve analyst.

Mr. Stearns is a financial planner and head coach of SFSG, a Greensboro, North Carolina, wealth management firm. He is also an expert chess player and frequent speaker on strategic thinking for individuals, businesses and communities.

In 1864, a series of orders concerning decisive troop movements during the American Civil War was lost by a courier of the staff of General Robert E. Lee of the Confederacy. An alert Union soldier found the orders, packaged with three cigars, and passed them up the line to General McClellan. As a result, Union troops were able to choose Antietam Creek as the battleground to stage a close victory over Confederate forces. Otherwise, it is likely that the Union would have fought the Battle of Gettysburg with Confederate troops on the favorable high ground, perhaps changing the course of the American Civil War.

Scenario planning, or scenario learning, as it is often called now, is the understanding that many different future worlds are

possible and to analyze what events, both big and small, can change the course of history. Scenario learning's real strength is the discipline to look at the many different futures possible and learn from the exercise.

When used with clients, it can be a wonderful tool for enhancing the bond between advisors and their clients, and helping them understand how decisions they both make could have an impact on their future. While optimizers generally use historical data to project possible futures, scenario learning uses what we think about the future and capitalizes on that knowledge.

How does scenario learning work and why does it hold great promise for the financial planner of the 21st century? At the ICFP's 1999 CFP Masters Retreat in Squaw Valley, California, we moderated a series of scenario learning exercises for a group of high-level CFP veterans who have seen every gimmick the industry could throw at them. The response to this creative, forward-looking approach was nothing short of electric. The idea flow was exciting and very positive. When Roy

Ballentine coupled the powerful scenario learning techniques with Monte Carlo simulation software, the result was tremendous. After more than six hours of the topic and a long day, over half the audience returned for an evening rap session that went on into the wee hours.

At the Squaw Valley Masters Retreat, 45 planners who were interviewed responded (ranked by how frequently they responded) to the question, "Why are you interested in scenario learning?" These were the top three answers from 37 of the 45 planners interviewed:

1. Busy in their practice, little time for creative, forward thinking
2. Have been burned several times by betting on "one future"
3. Beginning to distrust optimizers and other "backward looking" approaches to evaluating the future

Origins of Scenario Learning

The earliest scenario learning (SL) was developed with the invention of chess in

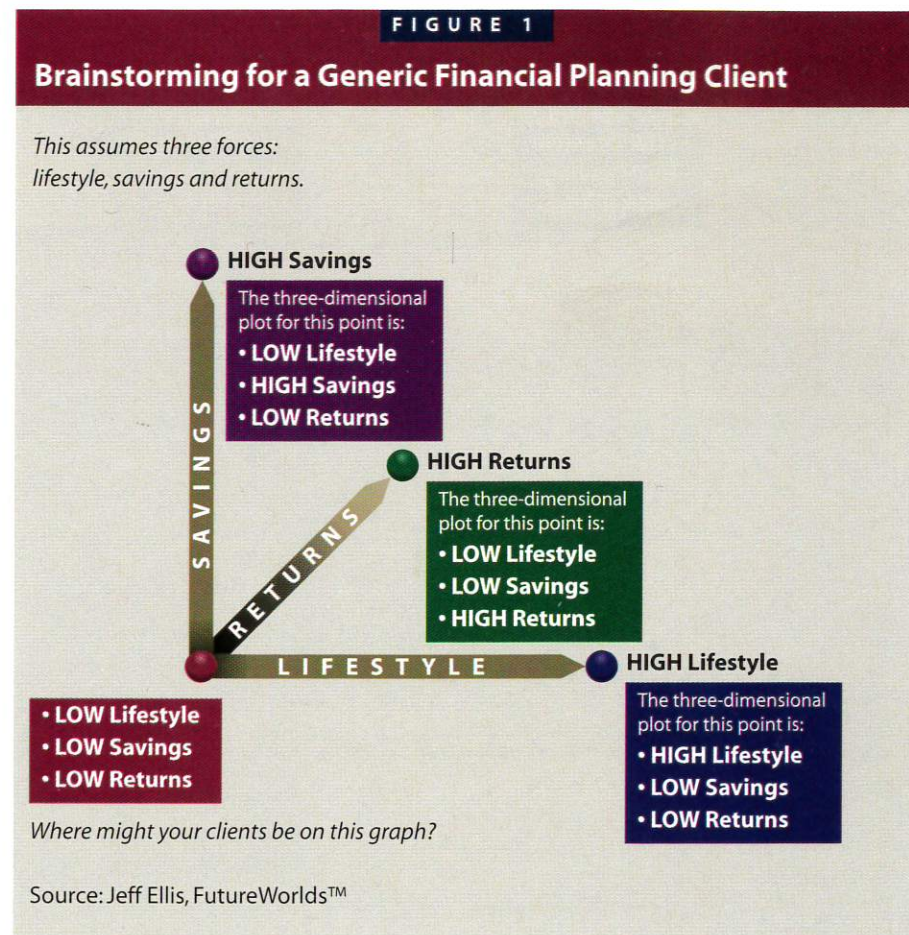
India and by the great Chinese military strategist, Sun Tzu. Only after World War II did it become widely used in the modern military, primarily by the Air Force. In the 1960s, Herman Kahn, who had been part of the Air Force SL development, refined scenarios as a tool for business forecasting. Although Kahn later became one of America's top futurists, it was Pierre Wack at Royal Dutch/Shell who demonstrated its true power for business.

Wack and the Group Planning Unit at Shell were looking for events that might affect future oil prices. At the time, prevailing wisdom was that oil prices would remain steady due, in large part, to pressure by the developed nations. After the 1967 Arab-Israeli War, they created two primary scenarios. The one that (accurately) predicted the 1970s oil shocks was, at first, largely ignored. Wack then decided to make the alternate future "real," helping Shell management vividly imagine the decisions with which they were faced. The 1973 Yom Kippur War in the Middle East created the first shock, and only Shell was prepared emotionally for the change. Fast reaction led Shell to go from one of the weakest "Seven Sisters" to one of the most powerful and profitable oil companies in the world.

What assumptions are you using today that, if wrong, could cause chaos in your clients' or your own family's financial future?

- Technology stocks must have their way in the first decade of the 21st century
- Index funds must outperform most passive managers
- The Internet will not affect my high-touch financial planning business
- The baby boomer trend must bring prosperity

In chess, those who analyze and stick to only one possible future are beaten regularly by the experts, masters and grand-



masters who understand the need to examine many possible futures.

Scenario learning takes a planner into uncharted territory. Done well, it removes the planner and the client from the inhibitions of today's world and the day-to-day frustrations that dominate our lives. This should be a way to discover new thinking and perspective, a chance to change our lives and our clients' lives, a chance to get closer to realizing our dreams. A discipline or method is required to do this; otherwise, we will go up and down the garden path, endlessly engaging in fanciful thoughts but never finding a useful answer.

There are two basic scenario learning approaches that already have been used successfully in financial planning,

although many techniques exist and are appropriate for different situations.

Technique #1: A 3-D Model

The first technique allows us to apply scenario learning efficiently and visually by constructing a three-dimensional model showing of the full spectrum of available futures. (This model is a concept developed and trademarked by Jeff Ellis called FutureWorlds.) With a little practice, it is enjoyable. The technique identifies key drivers of the future, helps visualize each of the full range of futures and portrays the range of options on a broad scale.

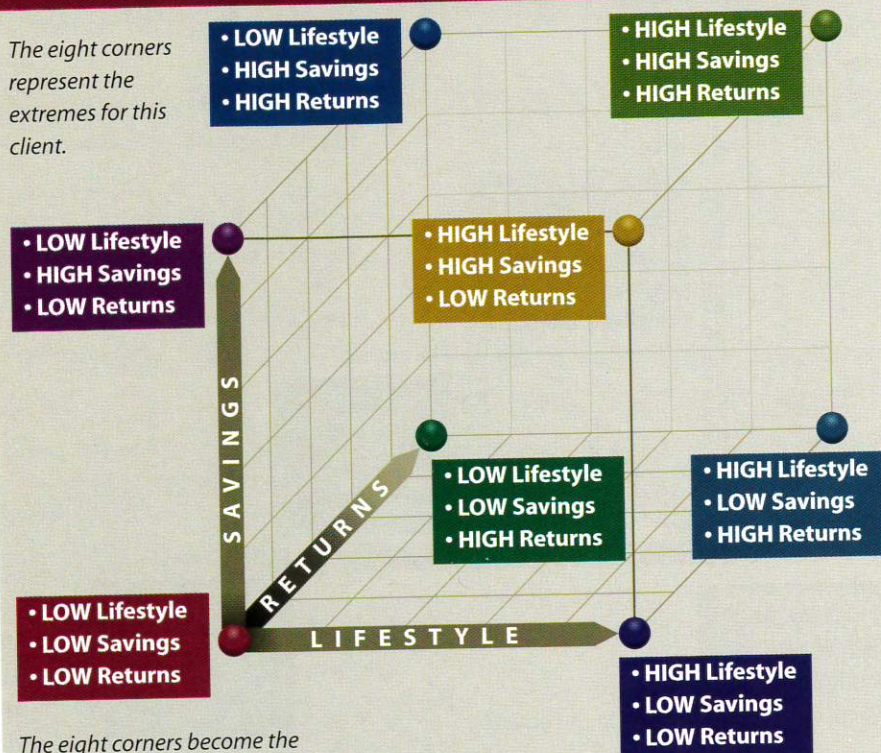
The beginning of this future scenario

Contributions

FIGURE 2

Plotting the Three Variables

The eight corners represent the extremes for this client.



The eight corners become the future scenario for this generic case.

Source: Jeff Ellis, FutureWorlds™

TABLE 1

Naming High and Low Values

Variable/ Forces	High Value Description	Low Value Description
Lifestyle	Frugal Lifestyle	Lavish Lifestyle
Savings	Large Savings	Small Savings
Returns	High Returns	Low Returns

exercise is a brainstorm into the future around the focus that concerns us the most: our clients' different career or business choices, their investments or their

practice. It is fun to let our hair down, to lose inhibitions, and to fantasize about what might happen. In fact, the craziest brainstorms can be the best because they collect wider information. They also can frustrate planners who are used to getting to a bottom-line solution quickly and then moving on. We use Post-it notes to record our ideas and scatter them haphazardly in front of us. We see before us the many elements of the future—at first, our mind processes the future without the benefit of a systematic method to clarify our thoughts.

Now we must put order to this jumbled data. To do so, we move our Post-it notes around until we have sorted nearly all of them into three different groups of

ideas. When we have succeeded, each grouping is actually an overall key driver or variable that will shape the future. In fact, the future we have brainstormed can be attained by the interplay of just these three fundamental forces or variables, although we know that minor variables (like Lee's lost orders) can radically affect the future. This model with just three variables not only captures our future, but conveniently shows us what gets us there.

Figure 1 provides a two-dimensional example that might be a useful starting point for a generic financial planning case. The brainstorm assumes that lifestyle, savings and returns are the most formative influences on the future for this particular client.

The highest and lowest values these drivers or variables can take actually frame the widest possibilities that can exist from our client, according to our brainstorm. It is helpful to draw the three-dimensional plot as a cube that encloses the extreme possibilities. An example of the cube is shown in Figure 2. The eight corners of the cube represent the extreme possibilities. If our brainstorm is effective and our variables are chosen well, our clients' likely futures should lie within the cube.

Next, we name the extreme values for each of the variables descriptively. As shown in Table 1, in our generic case, the high value for the "Lifestyle" variable (our x variable) is called "lavish" and the low value is "frugal." The second variable (our y axis), named "Savings," has its high value termed "large" and the low value as "small." Returns on invested assets (our z-axis) are recognized simply as "high" and "low." What a client considers "lavish" or "frugal," "large" or "small," or "high" or "low" depends on their reference point and on their expectations. This is helpful because we are engaging in their world as they see it rather than how we may see it.

Now let's imagine the eight extreme worlds that exist at the corners of this cube as illustrated in Figure 3. To do this,

we combine high and low values for each of the three variables according to the eight permutations (such as high, high, high; high, high, low; low, low, low, and so on). Go to each one of these extreme corners and immerse yourself in it. Use all your senses—look, feel, hear, smell and taste it. Give each future scenario a name that conveys its essence to you (a movie, book, corporation—anything that works for you).

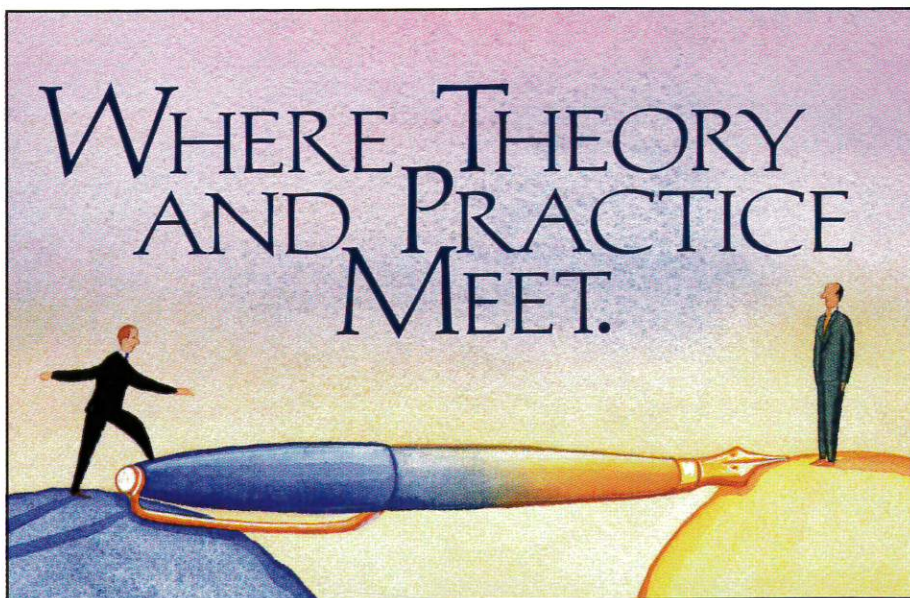
The eight possibilities that we imagined and named for these generic cases are

1. Recluse
2. Conservative
3. Sage
4. Crown Prince
5. Hedonist
6. Spendthrift
7. Hoarder
8. High Roller

These are shown in Figure 3. Do we have any clients who fit these descriptions, or at least has a blend of them? We have now charted the full spectrum of options for the future and visualized these worlds. What appeals to you? What is unappetizing? What have we learned about the possibilities? How can we use these lessons?

The best way to translate scenario learning into action is to consider trajectories across the full spectrum of possibilities as represented in the cube of future worlds. How do you move within this cube from where you are to where you want to be? How do you track the trend of economic or technological forces that shape your future, but are outside of your control? How might you alter your chosen direction if conditions change? How could you choose actions that hedge different futures until you know which way to go?

For argument's sake, let's assume that our client is middle-aged and best described as a Recluse (frugal lifestyle, small savings and low returns on assets.) It can be no surprise for our generic example, as shown in Figure 4, that the likely



CENTER FOR FIDUCIARY STUDIES

A full-time training and research center

Co-directors:

Roger Gibson & Don Trone

*Unique, fast-paced training that's
part seminar, part retreat, part think-tank.*

•
Courses Emphasize:

Practice Management

Portfolio Theory

Investment Fiduciary Responsibility

Certified Fiduciary Audit™

•
Customized training and consulting services.

Continuing education credits are available.

•
For more information or a course offerings brochure,
call 412.369.9925 or e-mail dontrone@msn.com

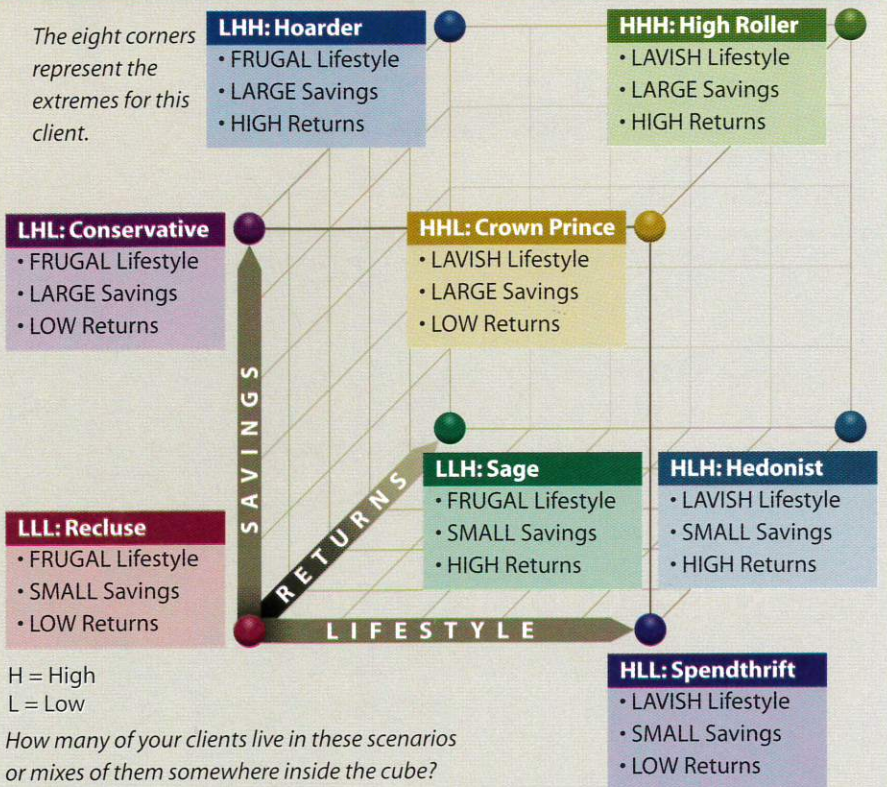
katz
University of Pittsburgh

Contributions

FIGURE 3

Naming the Extremes

The eight corners represent the extremes for this client.



H = High
L = Low

How many of your clients live in these scenarios or mixes of them somewhere inside the cube?

Source: Jeff Ellis, FutureWorlds™

future, without our expertise, is the Conservative scenario, with the client presumably saving more and living even more frugally. Does this match what the client really wants to do or should be doing, based on our analysis?

Let's say the client should go to the more attractive Sage scenario. We can help make this a reality with higher returns and little change in lifestyle or savings. We can focus on adjusting the portfolio to increase returns, as represented more clearly by the graph in Figure 5. Indeed, we might find desirable changes in lifestyle and savings, as well, and these trade-offs can be discussed easily with the client by means of this three-dimensional figure.

A younger client may also find herself

to be in the Recluse scenario, but for her it might be possible to target the High Roller scenario if she desires and it is within her talents. If this client fails to make the money she intends, or does not receive her inheritance when she expects, she can switch to Hoarder behavior later in life (sometimes easier said than done) and still retire at her chosen time. For planners with clients who have increased their stock holdings or the risk of their existing holdings—or both—is there a back-up plan if the market doesn't cooperate? Financial criteria can be set ahead of time to signal when the switch is necessary to meet this particular client's minimum retirement goals. Figure 6 illustrates this set of choices.

This type of exercise helps planners and their clients capture the extremes of their situation in their own terms. Scenario learning reveals important questions to be addressed. The graphical representation permits quick and thoughtful consideration of the major forces on the client's life and visually shows how their key choices for the future interact. The actions that follow can be made with better visualizations of alternative futures and satisfy the need for minimum future regret.

Technique #2: Developing Alternate Future Story Lines

The second technique already being used successfully in financial planning involves the identification of key variables for the future (much like the first technique) with the creation of two or three plausible futures. Here, we are taking what we already think may happen (base case) and creating entirely different futures by challenging our assumptions.

Boom Times

Let's assume that our first scenario projects that the baby boomer wealth effect (championed by Harry Dent and others) will create tremendous prosperity for the next ten years, followed by a period of lower equity growth as boomers pull money out of stocks, instead of putting it in. Technology stocks continue to flourish, with portfolios of 50–70 percent high-tech allocations becoming common. The wealth effect continues to balloon vacation properties and all sorts of upscale consumer goods. Spending stays high through traditional retailers and Internet shopping malls. We will call this scenario "Boom Times." Many investors are gravitating toward the Boom Times scenario, with or without the help of their planner. The client embraces the good times, spends

Contributions

FIGURE 4

Scenarios: Starting Point, Target Point, What to Avoid

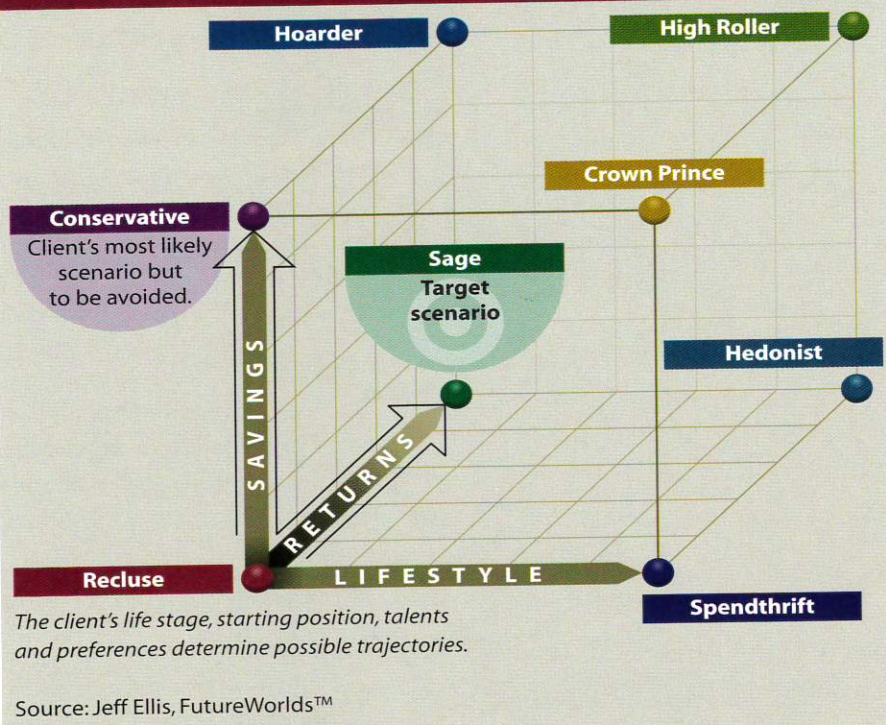
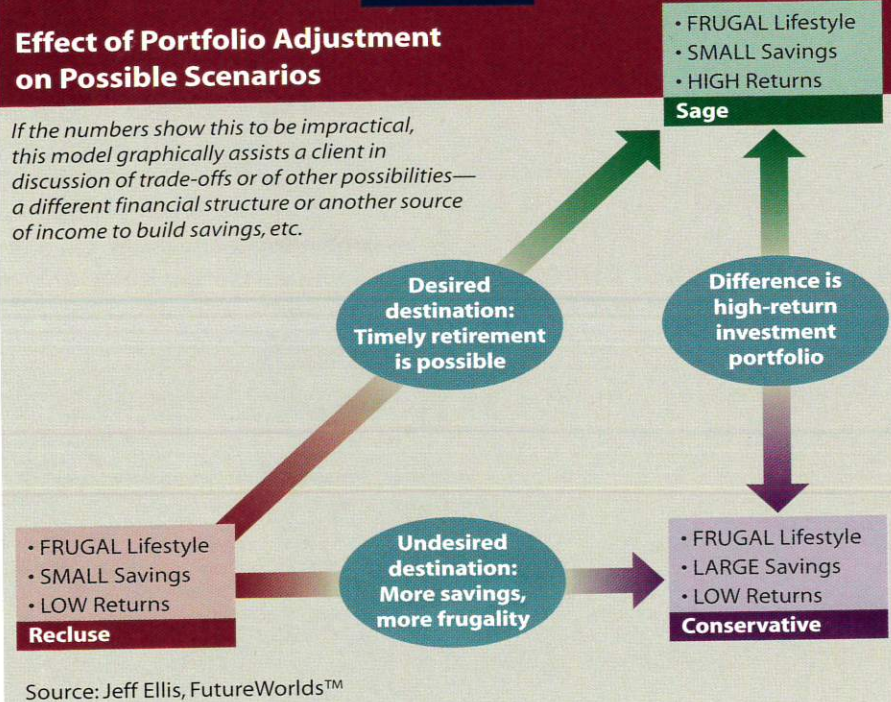


FIGURE 5

Effect of Portfolio Adjustment on Possible Scenarios

If the numbers show this to be impractical, this model graphically assists a client in discussion of trade-offs or of other possibilities—a different financial structure or another source of income to build savings, etc.



lavishly and saves less as investment returns seemingly make saving unimportant.

The good times help pay down the national debt substantially, causing a high demand for bonds and a resulting decline in interest rates. Just as boomers start retiring, they are forced to stay with a high percentage of stocks, liquidating a bit each month for cash flow, rather than rotating to low-paying bonds.

Margin Bust

The second scenario assumes that the Internet severely compresses profit margins for many goods and services (excluding our industry, of course!), which has already happened in a number of sectors. As margins become squeezed in 2003–2005, corporate earnings for many companies flatten out, causing further erosion in price/earnings ratios. Technology stocks still have momentum, but profit “accidents” become much more frequent as certain core non-technology businesses cut information technology spending to prop up anemic cash flow.

As the stock market sputters to a stop in this scenario, the wealth effect shifts into reverse. Baby boomers begin to panic, with their retirement in sight, and double-digit returns no longer are the norm. Reduction in spending compounds the margin problems, creating a downward cascade effect. We will call this scenario the “Margin Bust.” Your clients pull in their belts radically as all their friends begin to sell stocks and curtail their lifestyle. Bond yields have plummeted in the recession, so they reinvest stock proceeds at low interest rates, locking in a more modest lifestyle for many.

Return to Sanity

If you find yourself saying the Margin Bust will never happen and you like the Boom Times much better, you have

missed the “learning” part of scenario learning! Reasonable people will differ on the likelihood of the Margin Bust (this varied between a 5 percent and 65 percent chance with planners interviewed for this article). There is also a third scenario, the “Return to Sanity” variant, which combines elements of the other two scenarios with entirely different possibilities.

In this third scenario, speculative excess is rung out of the economy in a recession that lasts for almost a year. It doesn't cause a meltdown but actually refocuses your client on sound financial planning principles of diversification, saving and more modest expectations. The baby boomer megatrend pulls the economy along but not until many of the dot-com frenzy dies off and marginal businesses are forced to merge or go out of business. While not an extreme scenario like the other two, modeling wild fluctuations in returns over two- to three-year time segments through conventional financial planning models or using Monte Carlo simulations is critical to viewing this future realistically.

Have you “bet the farm” on one of these three scenarios or some other future, either because you believe it's most likely or your client believes in it to the exclusion of considering other futures? What do you consider your role to be—“go with the flow” or “devil's advocate”? Either way, scenario learning using either (or both) of the techniques can help you and your team or client focus on alternatives. Better decisions are made with better tools and more information—scenario learning is a disciplined tool that can help turn raw information into knowledge to help make better decisions.

Conclusion

Planners can use these scenario learning techniques internally to help themselves



WE WON'T LEAVE YOU STRANDED

No one wants to be stranded — left hanging, grasping for information only to come back empty-handed. Or worse yet, with the wrong advice. We're committed to getting you the information you need — when and how you want it.

Designed with quality and value in mind, our pure no-load mutual funds have proven to be reliable. Babson Funds, and the service-oriented professionals who manage them, can help you address today's needs and tomorrow's goals.

Call us at 800-422-2454 or visit us on the web
at www.babsonfunds.com

BABSON FUNDS

JONES & BABSON DISTRIBUTORS
A Member of the Generali Group

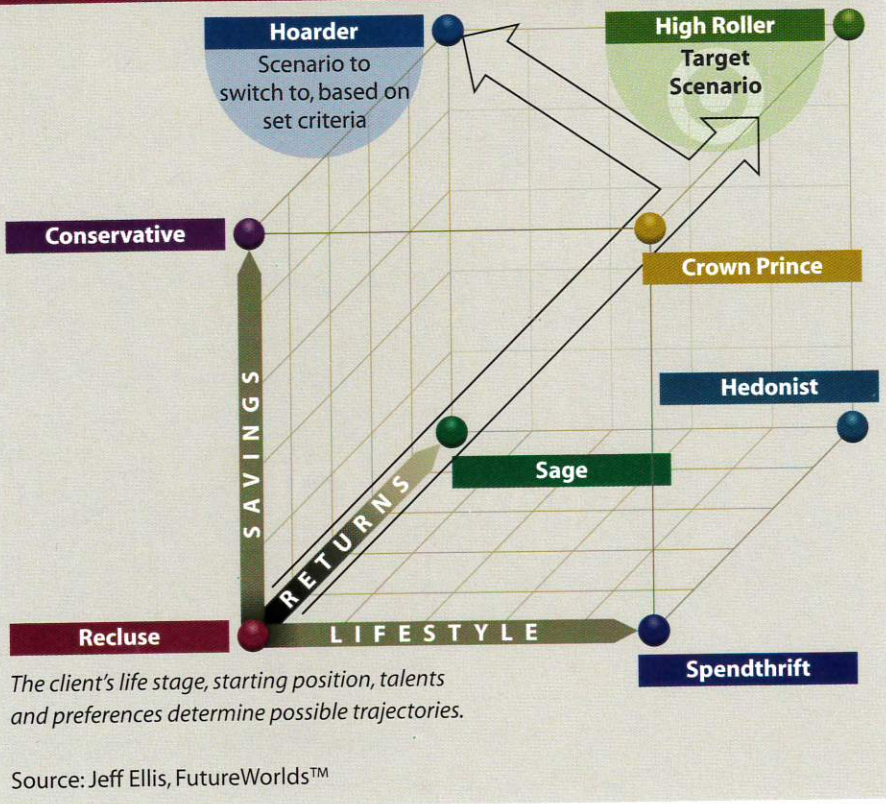
Past performance is no guarantee of future results. For more complete information, including all annual charges and expenses, please call 800-422-2454 for a Prospectus, which should be read carefully before investing.

Distributor: Jones & Babson, Inc., Kansas City, Missouri

9/99

FIGURE 6

Switching Scenarios to Meet a Goal



a tool for which forward-looking planners are uniquely suited to use for their own benefit and further strengthen the bond with clients.¹

Suggested Reading

1. Liam Fahey and Robert M. Randall, *Learning from the Future* (New York: John Wiley & Sons, Inc. 1998).
2. Peter Schwartz, *The Art of the Long View* (New York: Doubleday Currency, 1990, revised 1996).
3. Paul J. H. Schoemaker, "Scenarios," *Sloan Management Review*, Winter 1994.
4. Margaret J. Wheatley, *Leadership and the New Science: Discovering Order in a Chaotic World* (Brett Koehler, 1999).

Endnotes

1. At the April 2000 Advanced Planners Conference in Phoenix, Arizona, hosted by the Financial Planning Association, we will use scenario learning to help attendees evaluate and explore four different case studies.

and their teams focus on future possibilities and determine how each would affect different clients with wide variations in objectives and risk tolerances. You also can use these techniques externally with clients to help them understand how the different futures might affect them. The beauty of both approaches is that you can adjust them to be intensive for clients who are interested in an in-depth discussion (and perhaps willing to pay for it) or "SL Lite" for those clients less tolerant of adult education.

You may be thinking that many of your clients will want you to pick the scenario that you think is most likely. How often do we hear "Isn't that what I pay you for?" You, as the expert, can still pick

the strategy unilaterally—scenario learning is, then, simply a more sophisticated risk tolerance and objectives clarification tool that you can use internally to explore and evaluate different options, perhaps bouncing only a few of the possibilities off your client to confirm that you are both on the same page.

If you are one of the increasing number of planners who consider themselves a "vision consultant" or even "fun coach," scenario learning can help examine the impact of different careers, vacation strategies (buy the second home or use the money to vacation different places) or even the choice of marriage partners. Several planners are using scenario learning to map out their own business strategies. It is