

# Lifelong Income: The Zone Strategy

One of the difficult decisions that must be made at the start of retirement is how to create lifelong income for your client. There are several choices: you can generate income from an investment portfolio; you can buy life annuities; or you can try variable annuities that offer guaranteed payouts for a specified term.

How do you decide what strategy to follow and which products to use?

What works for one client may be disastrous for another. So, to start, you need to evaluate two critical factors: a client's emotional capacity, and his or her financial

capacity. Only then can you select the correct strategy.

If a client's emotional capacity is high enough, she can hold a portfolio of fluctuating equities, so the degree to which a client can tolerate volatility can be one of the limiting factors in financing retirement. But more importantly, you need to evaluate the client's financial capacity.

Before you can talk about your client's dreams—or the wisdom of asset allocation, or the virtues of investing large cap or small cap—you must first determine if your client has the means to finance retirement. If she doesn't, then

**TAKE THE TEST!**

- Carefully read the article, "Lifelong Income: The Zone Strategy," by Jim Otar
- Then visit [www.cecorner.advisorce.com](http://www.cecorner.advisorce.com) to register and answer a multiple-choice exam about the material.
- A CE Certificate will be issued electronically through the website after you pass the exam with a score of 65% or greater.

**OBJECTIVE**  
"Lifelong Income: The Zone Strategy" is eligible for the following CE credits, accredited by the following organizations:  
**1.00 Advocis**  
**1.00 Investment Dealers Association of Canada**

no amount of emotional capacity and risk tolerance will improve the outcome.

Determining financial capacity can be easy, so long as you convey

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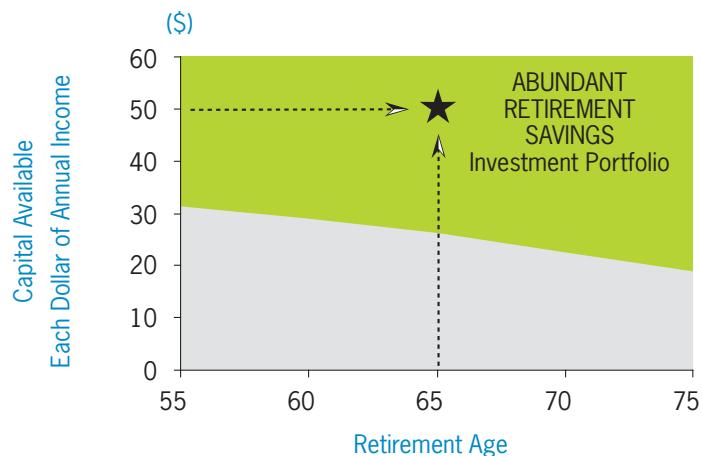
**SUSTAINABLE WITHDRAWAL** Asset mixes and drawdown rates assuming the client will reach age 95.\*

Retirement Age	Asset Mix: Equity/Fixed Income	Sustainable Withdrawal Rate
55	50/50	3.2%
65	40/60	3.8%
75	30/70	5.3%

\* Sustainable withdrawal rate from an investment portfolio based on the market history, allowing for a probability of depletion less than 10%. The equity proxy is SP/TSX since 1919, average dividend 2%, average MER 2%. On the fixed income side, the long-term net return (after expenses) is assumed 0.5% over and above the six-month deposit rate.

Source: Otar & Associates

**ABUNDANT SAVINGS** Our hypothetical client has plenty of cash on which to retire.



Source: Otar & Associates

Continued from page 1

to your client what retirement planning is: providing realistic solutions and strategies that ensure his or her capital lasts a lifetime. It's not plugging some average numbers into a retirement model—the averages don't cut it. For proper retirement planning, you must base solutions and strategies on potential adverse outcomes and worst-case scenarios. Using the Monte Carlo simulators is a step in the right direction, but most fall short of reflecting historic market realities.

**Drawing Income**

The Sustainable Withdrawal Rate (SWR) is the largest periodic income that can be drawn from an investment portfolio without depleting the assets and is based on market history.

For an investor to be deemed to have sufficient cash, not only must she have the ability to finance her retirement, she must also be able to finance the time value of fluctuations in her portfolio (these being defined as the losses created by

long- and short-term market fluctuations and inflation in distribution portfolios).

Ideally, the SWR indicates a 0% probability of portfolio depletion. For practical purposes, combined with proper annual reviews, we can accept a more liberal probability of depletion. For our purposes, we'll assume the SWR means a maximum 10% probability of depletion at the age of death. When it comes to retirement income, there are three significant risk factors for the retiree:

- living too long;
- the portfolio running out of money prematurely; and
- the inability to maintain purchasing power due to inflation.

A retirement plan must cover all three factors to be considered well designed.

Special attention must be paid to longevity risk. Don't use the average life expectancy to calculate a client's retirement plan, because that's merely the age by which half the population will die, but after which the other half survives. In other words, if you use average life expectancies to determine the age of death in your retirement plans, at least half of your clients will run out of money during their lifetimes. Not a good track record for an advisor.

Some financial planning software tries to go a bit further by calculating an average life expectancy based on a list of questions, such as, "How much do you drink?" or "How many speeding tickets did you get in the last two years?" It compares the person's answers to averages and then spits out a num-

ber. But unless you're an insurance underwriter, these questions are useless. These averages don't mean anything. Clients are individuals and responses are subjective.

The proper way to handle the longevity risk is to review the mortality tables. They indicate the percentage of survivability for each age, and the age of death in a well-designed retirement plan should be high enough that the probability of survival won't exceed 15%.

So, for a 65-year-old client, use age 95 as the age of death, where the survival rate for a male is 7% and for a female 14%. When calculating for a couple, use age 95 for the younger spouse.

We use 95 as the age of death to cover all three risks: longevity, market and inflation (see "Sustainable Withdrawal," page 2). Using the sustainable withdrawal rate, you can calculate the assets needed to finance one dollar of income from an investment portfolio. This is calculated as 100 divided by the sustainable withdrawal rate. For example, for each \$1 annual withdrawal—indexed to inflation for life, starting at age 65, and lasting until age 95—you need about \$26.32 of capital at the beginning of retirement, calculated as 100 divided by 3.8% (see "Asset Multiplier," this page).

### The Green Zone

If the client's savings at the start of retirement are equal to or larger than the capital required, then his investment portfolio will provide a lifelong income. He's in the green zone with abundant savings and doesn't need to worry about an-

nnuities or variable annuities. His investment portfolio can finance retirement as well as the time value of fluctuations.

To make things easier, we can plot the asset multiplier. The horizontal scale indicates the retirement age. So, divide the client's total savings by his annual income required at the beginning of retirement and mark that on the vertical scale. Observe if the point falls into the green (abundant) zone.

For example, Bob, 65, is just retiring. He wants his money to last until he is 95. His savings are \$1 million and because he has other indexed pensions already, he needs

only \$20,000 annually (indexed to inflation) from his portfolio. Does Bob have abundant retirement savings? There are two ways to make the calculation:

**Use tables.** The capital required for retiring at age 65 is \$26.32 for each dollar of income. The minimum capital he must have in his investment portfolio is \$526,400, calculated as \$20,000 x \$26.32. He already has \$1 million and therefore he has abundant retirement savings.

**Use the chart.** The capital available for each dollar of annual income is \$50, calculated as \$1 mil-

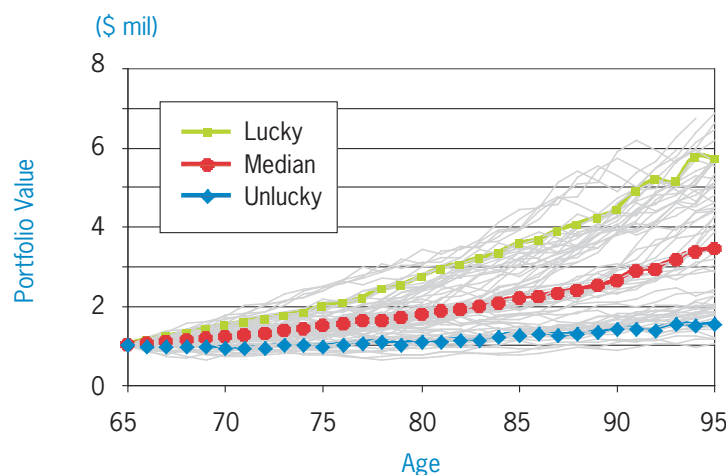
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### ASSET MULTIPLIER Capital requirement at the start of retirement for each dollar of indexed withdrawal.

Retirement Age	Capital Required
55	\$31.25
65	\$26.32
75	\$18.87

Source: Otar & Associates

### LUCKY OR NOT? Initial savings levels are the largest determining factor for comfortable retirement.



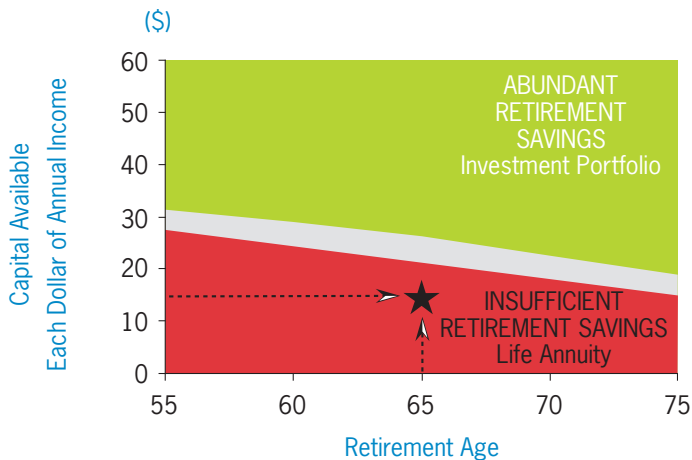
Source: Otar & Associates

**ANNUITY OUTLAYS** Capital required, for each dollar of periodic income, to purchase an annuity at the start of retirement.

Retirement Age	Female	Male
55	\$27.69	\$25.79
65	\$22.01	\$20.48
75	\$15.71	\$14.60

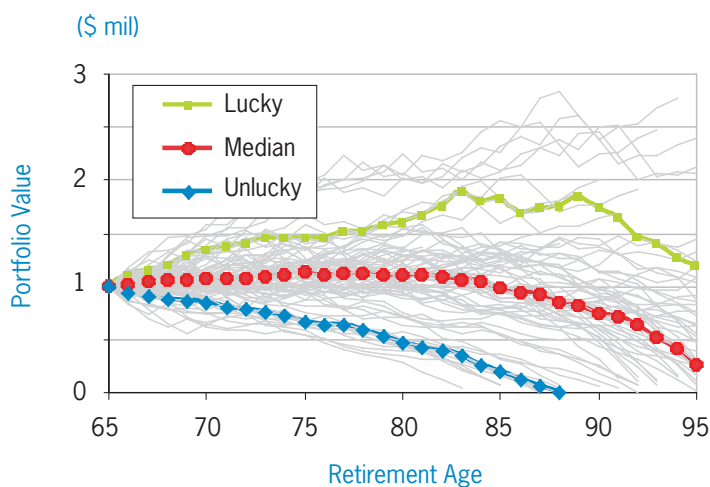
Source: Annuity quotes by Standard Life, July 4, 2007

**IN THE RED** Client doesn't have enough capital at the start of retirement.



Source: Otar & Associates

**CASH OUT** Drawing an unsustainable income from a \$1 million portfolio means the client has a good chance of running out of money during his life.



Source: Otar & Associates

Continued from page 3

lion divided by \$20,000. Plot that against age 65. The intercept—where the two arrows meet—is deep in the green zone. Therefore, Bob has abundant retirement savings. He can keep all his money in an investment portfolio and have a lifelong, indexed income (see “Abundant Savings,” page 2).

By plotting the portfolio value over his retirement, as if he were to start his retirement in any year since 1919, we get a view of the range of all outcomes.

The top 10% is designated as “lucky” and the bottom 10% is designated as “unlucky.” The median is where half of the outcomes did better and half did worse (see “Lucky or Not?” page 3).

**The Red Zone**

Not all clients have abundant savings and many will have to manage with less. If your client has insufficient savings, the most effective way of eliminating longevity, market and inflation risks is to buy a single premium immediate life annuity with payments that are indexed to the CPI. For the same age of retirement, a life annuity pays more than the sustainable withdrawal rate from an investment portfolio. This is because both the capital and the longevity are pooled in an annuity.

Therefore, in the red zone, your client has one practical choice—an indexed life annuity.

It will pay less per month than what the client needs, but she will have a lifelong income. She does not need to worry about running out of money, and won't be check-

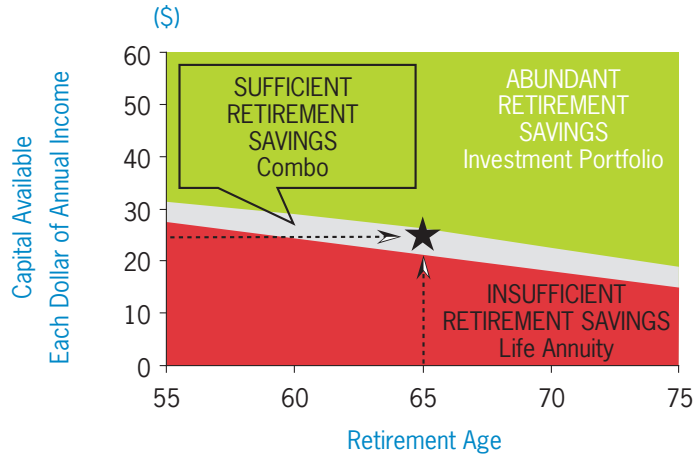
ing her portfolio every minute and driving her advisor crazy in the process (see “Annuity Outlays,” page 4).

If the client’s savings at the start of his retirement are less than the capital required, then he has insufficient savings and is in the red zone. For example, Mark is 65 and just retiring. He wants his money to last until he’s 95. His savings are \$1 million and he needs \$60,000 annually (indexed to inflation) from his portfolio.

Is Mark in the green zone? The capital required for a 30-year time horizon is \$26.32 for each dollar of income. He needs a \$60,000 income, and therefore the minimum capital he must have in his investment portfolio is \$1,579,200, calculated as  $\$60,000 \times \$26.32$ . He has only \$1 million, falling well short of the green zone. But is Mark in the red zone? The cost of a life annuity is \$22.01 for each dollar of income. To purchase that, he’d need \$1,320,600 in capital, calculated as  $\$60,000 \times \$22.01$ . Since he only has \$1 million saved, he’s in the red zone. He doesn’t have enough savings to maintain his lifestyle.

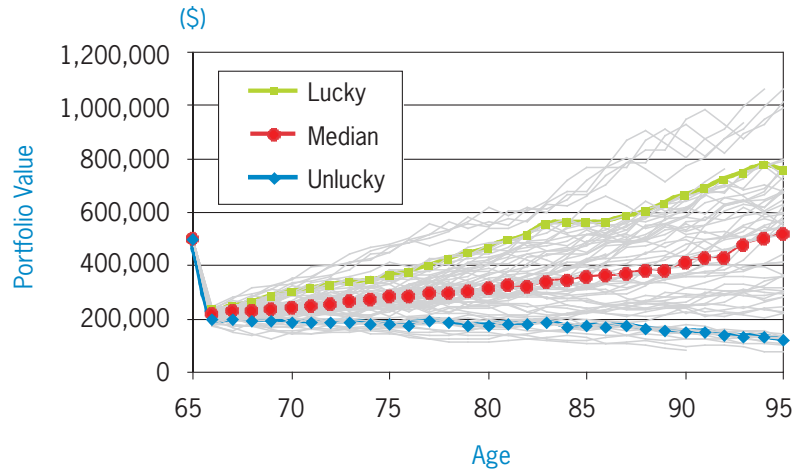
Plotting this on a chart bears that out (see “In the Red,” page 4). The capital available for each dollar of annual income is \$16.67, calculated as \$1 million divided by \$60,000. If that’s plotted against age 65, the intercept is deep in the

**JUST ENOUGH** Exporting some income risk to an insurance company helps these retirees make it.



Source: Otar & Associates

**ANNUITY ADVANTAGE** Mixing an insurance product with the investment portfolio provides the client with lifelong income.



Source: Otar & Associates

red zone. Both calculation methods determine Mark has insufficient savings.

Mark has only one feasible choice: buy a single premium immediate life annuity.

Starting at age 65, this would pay

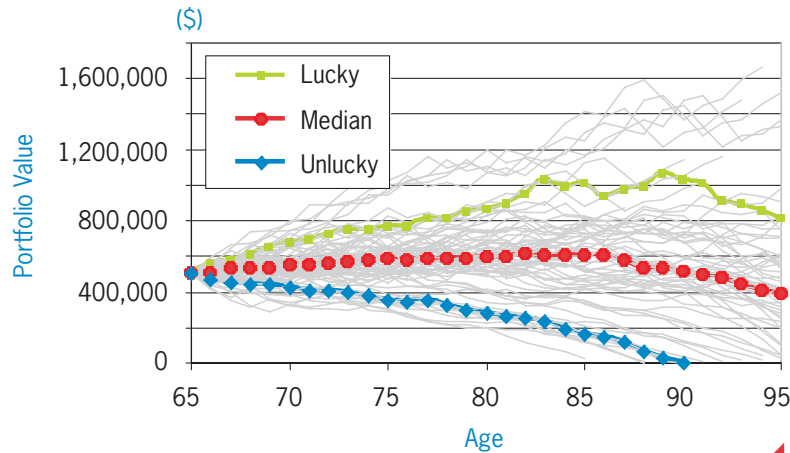
him an annual income of \$45,434 indexed to the CPI for the rest of his life. He’ll need to adjust his lifestyle expenses but nevertheless will have a guaranteed lifelong income, and that’s a much better outcome than holding a potentially volatile investment portfolio and living with the probability of running out of money.

Mark might think that if he’s going to have to cut expenses to

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**If retirement savings are insufficient, only a single premium indexed life annuity can provide guaranteed lifelong income.**

**SUFFER THE CONSEQUENCES** Refusing to buy the life annuity in the grey zone means the retiree might run out of money prematurely.



Source: Otar & Associates

Continued from page 5

\$45,434 per year that it might make sense to keep the money in an investment portfolio, draw off an income, and take his chances.

But if he invests his money instead of buying a life annuity, then he has a 39% probability of running out of money by age 95 (see “Cash Out,” page 4). Anything above a 10% risk for running out of money is unacceptable in a properly designed retirement plan. In fact, if he withdraws more than \$38,000 from his investment portfolio annually, his retirement finances would be at risk.

So the lesson is, if retirement savings are insufficient, only a single premium indexed life annuity can provide guaranteed lifelong income, nothing else. Discourage your clients from taking undue risks and tell them to resist the urge for short-term gains that will likely bring long-term pain.

**The Grey Zone**

But what about that grey area between the abundant and the insuff-

**What if Jane ignores your advice, and keeps all her money in the investments? In that case, the probability of running out of money by age 95 is 22%.**

ficient? When a client merely has enough retirement savings, you need to weigh the options carefully to determine what combination of products will generate lifelong retirement income.

Some risk must be exported to an insurance company, because the risks of financing retirement solely through an investment portfolio are too high. In these situations, an advisor must find the perfect mix of an investment portfolio and an indexed life annuity to provide lifelong income.

Keep in mind clients don't like buying annuities, but there are two things you can do to ease the pain. First, always buy the annuity that

offers a minimum payment guarantee option. That way, in the event of premature death, some or all of the premium reverts back to the beneficiary or the estate. Second, instead of buying an annuity in one instalment, spread the cost out over three or four years and build an annuity ladder. This reduces the interest rate risk.

For example, Jane is 65 and ready to retire. She wants her money to last until she's 95. Her retirement savings total \$500,000 and she needs \$21,000 from her portfolio. The available capital for each dollar of annual income is \$23.81, calculated as \$500,000 divided by \$21,000.

The capital requirements to put Jane in the green zone are \$26.32, and for the red zone they're \$22.01 for each dollar of income. Jane has \$23.81 of savings per dollar of income required, which is in between those two figures.

If you plot her \$23.81 of available capital against age 65, the intercept is in the grey zone. She'll have sufficient savings, provided the risk is exported to an insurance company.

**The Perfect Mix**

Here is the formula to calculate how much of the assets should be allocated to buy a life annuity in the grey zone:

$$\text{Percent annuity required} = \frac{(AM - AC)}{(AM - CLA)} \times 100\%$$

This calculation assumes:

- › AM is the factor from the “Asset Multiplier” table (page 3)
- › CLA is the cost of a life annuity

from the “Annuity Outlays” table (page 4)

- › AC is available capital per dollar of income

So, how much of Jane’s money should go to buy a life annuity? At age 65, the AM is \$26.32. Her CLA is \$22.01. Her AC is \$23.81. Plug these numbers into the perfect mix formula:

$$\begin{aligned} \text{Percent annuity required} &= \\ \frac{(26.32 - 23.81)}{(26.32 - 22.01)} \times 100\% & \\ &= 58.2\% \end{aligned}$$

The calculations indicate Jane should buy an indexed annuity for \$291,000, calculated as 58.2% of \$500,000 (nearest \$1,000). The rest of the money, \$209,000, stays in her investment portfolio. She would then have a lifelong income. The probability of depletion by age 95 is now 0%, based on market history.

But what if Jane ignores your advice, refuses to buy an annuity, and keeps all her money in the investments? In that case, the probability of running out of money by age 95 is 22%, not very high but still beyond the established comfort level of 10% (see “Suffer the Consequences,” page 6).

### Annuity Ladder

In the grey zone, the purchase of annuities can be staggered over a number of years to reduce the interest rate risk. Also, as the client gets older, the annuity payout increases for the same premium.

As a rough rule of thumb, the premium paid for each rung of the

annuity ladder should be about one-half of the preceding amount. Going back to the perfect mix example, we calculated Jane needed a life annuity for \$291,000 to ensure lifelong income. Instead of buying it all at age 65, she can purchase it in three instalments: \$160,000 at age 65, \$80,000 at age 67 and \$51,000 at age 69.

In the red zone, do not ladder annuity purchases; the risk is too high for any delay. In the green zone, the client does not need annuities but if she wants to buy them just to feel safe, you can then suggest laddering as a way to hold on to some capital. Of course, if a green-zone client wants to buy an annuity in a single instalment, don’t argue about laddering, just do as instructed.

### Variable Annuities

Last year, variable annuities with 20-year withdrawal guarantees were introduced in Canada.

At press time, only two Canadian insurance companies were offering them. It’s hard to know how the products will develop, but unless the withdrawal guarantees are extended for life, as they are in the U.S., they won’t effectively protect a retiree against longevity, market and inflation risks. Therefore, it may be wise to wait until more attractive products with better guarantees and features are available in the marketplace.

### Practice Management

Can you make use of the zones in your day-to-day practice management? Definitely.

Many advisors chase high-net-worth clients in anticipation of

**Sometimes, you can’t really help a client in the red zone, so it becomes a matter of how much time and energy you’re willing to earmark.**

larger commissions or trailer fees. It’s not unusual for me to have a portfolio review with a high-net-worth client and find out he’s in the red zone—usually as a result of excessive income requirement. The zone strategy gives you an excellent indication of the staying power of the high-net-worth client over a long term.

You don’t want to attract high-net-worth clients, only to convert them into low-net-worth clients in 10 years! You want them to prosper as time goes on. The key in distribution planning is not how much assets you have, but at what rate you withdraw from them.

If you want to minimize your workload, maximize your efficiency, avoid frantic phone calls from nervous clients after routine market fluctuations, and increase your income, then try to attract and retain clients who are in the green zone. Generally, these people have made it into the clear for a reason.

More often than not, they combine higher incomes and careful spending habits that allow them to save more for the future. Such clients value and respect your advice, treat you as a partner, and think that you deserve what you earn.

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Red-zone clients, by contrast, are there because, for one reason or another, they couldn't put aside sufficient retirement money. These clients are more likely to expect miracles from you, despise paying any fees, and phone you for your market opinion every time there's a hiccup.

These clients tend to believe the success or failure of their retirements depends on your actions, rather than on the fact that they didn't save enough in the first place. And, sometimes, you can't really help a client in the red zone, so it becomes a matter of how much time and energy you're willing to earmark for him or her.

Keep it simple.

Suggest the life annuity strategy, and if they don't take the advice or want to gamble with their insufficient savings, send them to the competition.

Of course, there are many other considerations for complete retirement planning. Each case is different. However, implementing a methodical approach based on market history will help you develop bulletproof strategies that clients can enjoy for a lifetime. It will also help you reduce your professional liability.

Now that you've finished reading, go to [www.ceccorner.advisorce.com](http://www.ceccorner.advisorce.com), register and complete the exam to receive your CE credits.

*Jim Otar, CMT, CFP, is a financial planner, a professional engineer, a market technician and founder of [retirementoptimizer.com](http://retirementoptimizer.com). He is the author of High Expectations and False Dreams—One Hundred Years of Stock Market History Applied to Retirement Planning.*

#### **NEXT TIME**

CE Corner will be a recurring feature in *Advisor's Edge*. We'd like your input about topics that are of interest to you. To make a suggestion, please email [philip.porado@advisor.rogers.com](mailto:philip.porado@advisor.rogers.com)

#### **LAST TIME**

And, if you missed our first CE Corner, be sure to read "Moving to the U.S." and pick up your credits.