WILL THEIR RETIREMENT ASSETS LAST?
ANALYZING THE CHANCES FOR SUCCESS

By Dennis Stearns

In this issue's Portfolio Makeover series, financial planner Dennis Stearns analyzes the portfolio and spending plans of a newly retired couple, and makes some valuable suggestions to ensure that they will not outlive their resources.

INVESTOR PROFILE

- Retired couple, both age 65; we will call them "John" and "Mary."
- John has a background in information technology. He has reasonable money skills, but is finding current stock and bond issues more complicated; Mary has low money skills and interest.
- Both are in good health, family longevity is about average and they expect to live to about the national average, roughly to age 85.

GOALS

- Long-term goal is to withdrawal 8% from their portfolio to supplement Social Security and a pension.
- Considering downsizing their home in a few years to a community where they wouldn't need a car to get around, and possibly reducing expenses plus adding to investment reserves.
- Need help in evaluating their asset allocation to both sleep well at night and meet their long-term retirement goals.
- Recently updated their wills and may want more in-depth estate planning in a few years.

PLANNING ANALYSIS

John and Mary have done a good job over the years of keeping expenses modest and saving as much as possible after helping educate their three sons. While experiencing modest declines in the difficult bear market, their diversification helped them weather the worst of the storm. Their ongoing living expenses are reasonable compared to their income from pension and Social Security and their portfolio size.

PLANNING APPROACH

Before we get to the particulars of John and Mary's situation, it is important to discuss some background as to how I did this analysis and why I looked deeper at certain key issues going forward.

One of the key questions is the withdrawal rate. John and Mary would like to withdraw 8% annually from their investment portfolio based on its current asset allocation. But can they safely withdraw this amount each year and not run through their entire savings by the end of their lives? To examine this, I did both a linear retirement projection and a "Monte Carlo" simulation to determine how precarious their situation is given the rough treatment by the stock market over the last three years.

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LIKES AND DISLIKES

- John prefers mutual funds to individual securities for diversification and risk reduction; some preference for index funds and exchange-traded funds over actively managed funds. When interest rates are considerably higher, John would like to begin acquiring zero-coupon bonds, a strategy he has used successfully in the past.
- They consider their risk tolerance to be "moderate"; John has been willing to take more risk in stock mutual funds due to the steady income they receive from other sources.
- John has reduced exposure to long-term and high-yield bonds and has focused lately on more short-term bond funds. He is concerned that there will be another 1994-type rising interest rate environment that will create losses in longer-term bond funds.

FINANCIAL SUMMARY

- Fixed income from a pension ($28,000 per year) and Social Security ($27,000 per year).
- $713,000 in investments, with approximately a 55% stock and 45% cash and fixed-income allocation; 5% of their portfolio is in low basis IBM stock.
- Living expenses of $65,000 per year after tax.
- Live in a high income-tax state and have seen considerable increases in property taxes.

The Linear Projection

The linear projection (Figure 1) assumes a "base" scenario of a 7% average return with 3% inflation (a 4% real return on assets), a "best-case" scenario of a 9% average return with a 2% inflation rate (a 7% real return) and a "worst-case" scenario of a 5% average return and a 4% inflation rate (a 1% real return).

How reasonable are these return assumptions? Given today's investor sentiment that stock returns may be very modest going forward and that interest rates will stay low for some time, a more conservative investor would focus on the 1% to 4% real return scenarios. From a historical perspective, John and Mary's 55% stock and 45% cash and fixed-income portfolio would have produced at least a 1% real rate of return in 99% of the rolling 20-year periods since 1920 (1920–1940, 1921–1941, etc.). On the surface, this is comforting. However, since John and Mary believe that they will have around 15 to 20 years left to enjoy their investments, we should also examine five- and 10-year rolling returns. We should also look at periods where the risk premium has increased for a prolonged period of time (for instance, terrorism may be the current chief culprit causing perceived risk to be higher, helping depress price-earnings ratios) and time frames when interest rates have been increasing.

For the last 20 years, we have had a wind at our back, with declining interest rates that have helped price-earnings ratios increase—approximately one-third of the good stock returns in the 1980s and 1990s can be attributed to this expansion of the price-earnings ratio. This happens for primarily two reasons. First, lower interest rates tend to help companies expand earnings faster by allowing them to borrow money for expansion, mergers, etc., at lower rates. Second, investors are likely to pay more for stocks (per dollar of earnings) if their alternatives are becoming less attractive.

But that was then. Looking forward, with 10-year Treasury yields at over a 40-year low and tax-free bond and money market rates also reaching historical lows, a little good news for stocks (particularly selected higher-dividend stocks if the Bush tax plan makes progress this year) would attract money from cash and bond reserves and drive stock prices and price-earnings ratios higher.

At the same time, I believe that there is a good likelihood of a modest rise in interest rates and inflation in the next five to 10 years. This would cause a "wind at our face" for price-earnings ratios, reducing the real return after inflation on stocks due to contraction of price-earnings ratios and creating problems for longer-term bonds—which John has already identified as a potential threat to his plan.

It is also true that during difficult bear markets, corporations clean up their income statements and balance sheets, reduce costs across the board and become more lean to help maintain reasonable profit margins.

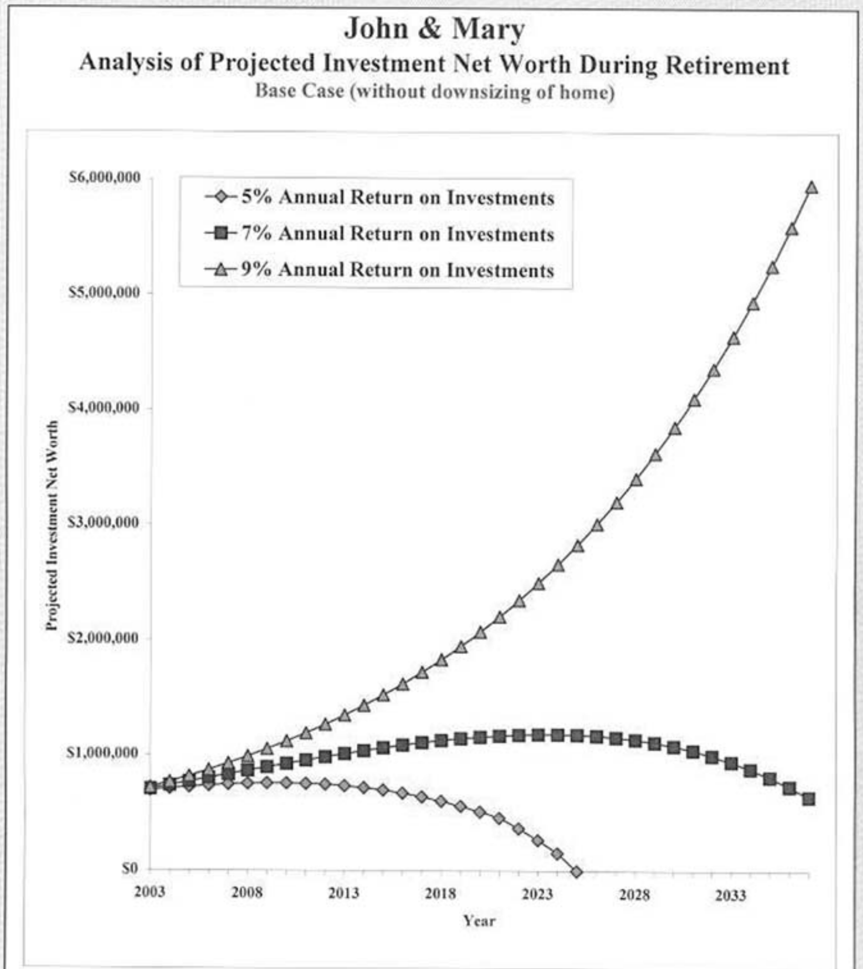
Productivity has been rising dramatically in recent years due to a number of factors, chief among them the successful integration of technology after years of difficulty with the marriage of humans and software products. The annual percentage growth of U.S. non-financial sector capital stock has also gone into negative territory for the first time in over 50 years, suggesting that when the economy does begin to recover, there will be pent-up demand that will fuel significant capital spending.

When you boil down all the good news and bad news, the odds of achieving at least a 1% real rate of return over the next 10 years with their current allocation mix are still very good. This level of real return may not meet John and Mary's 8% withdrawal rate goal (we'll talk more about that later), but our analysis indicates it would keep them afloat in an environment that presumably would continue to be quite volatile for both stocks and bonds and provide treacherous footing for traditional buy-and-hold portfolio strategies.

Monte Carlo: A Different Perspective

Monte Carlo simulations and Scenario Learning have been used by the military for many years to project multiple outcomes when the variables are many and

FIGURE 1. LINEAR PROJECTION



Scenario	*Investment Return*	*Rate of Inflation*	*Investment Net Worth Remaining at:* At John & Mary's Age 85
1% Real Rate of Return on Assets	5%	4%	$269,049
4% Real Rate of Return on Assets	7%	3%	$1,184,724
7% Real Rate of Return on Assets	9%	2%	$2,502,643

traditional linear analysis may not tell the whole story. "Monte Carlo," as you might have already guessed, gains its name from the casino establishments in Monte Carlo, one of the world's most famous gaming capitals. The analysis adapted for personal financial planning has little to do with gambling other than it uses sophisticated probability analysis that assumes the world is a "messy place" and that variables, like stock returns, usually happen in spurts up and down, rather than in a nice smooth average. Remember when the popular talk in the 1990s was about the 10% "average" returns in the stock market? Wisdom has shown that "You can drown in a river with an average depth of 18 inches," which means that averages and rules of thumb are often dangerous to use as planning tools!

I believe strongly that there are too many variables in play today to accurately predict what will happen five years out, much less 10 years. That is why for planning purposes, my firm first develops plausible scenarios for the next one and three years and then couples them with Monte Carlo simulations to see how an investor will fare in the majority of probable scenarios.

The three scenarios we currently feel are most plausible are:

1) Lower Lows—essentially a Dow 6000 scenario, with a 15% probability of occurring;
2) Trading Range—a 1960s-to-1980-type scenario where stocks are highly volatile and end up where they start, with a 45% probability; and
3) Back to the Baby Boom—a more optimistic future where many of today's negatives give way to recent Federal Reserve stimulation, increased Baby Boom savings rates, corporate clean up and a host of other positive influences that are already in the pipeline, with a 40% probability of occurring.

While my firm is considered to be one of the leaders in using this approach, we are the first to suggest that low probability events happen all too often. We believe through considerable experience that discarding one or more scenarios due to a low probability or because it doesn't fit the common view is perilous and diminishes the power of the "learning" part of Scenario Learning.

With this background, let's see how John and Mary's unique set of circumstances and goals fare in these various scenarios.

KEY PLANNING ISSUES

Issue #1: Will John and Mary potentially outlive their income?

The linear projection (Figure 1) indicates they are in good shape, although the 1% real return scenario is diving fast when they reach age 85.

FIGURE 2. MONTE CARLO PROJECTION

Name John & Mary

Spending Plan Strategies -- Year 2003 Dollars

Spending Plan Adjustment:	at John & Mary's age	30 % Decrease	20 % Decrease	10 % Decrease	Original Plan	10 % Increase	20 % Increase	30 % Increase
Probability	75	100%	100%	100%	**100%**	100%	100%	100%
Total Wealth	85	100%	100%	100%	**98%**	85%	54%	26%
> $1	95	100%	100%	94%	**72%**	38%	15%	4%
Probability	75	100%	100%	100%	**100%**	99%	93%	79%
Total Wealth	85	100%	100%	97%	**85%**	59%	32%	13%
> $250,000	95	100%	96%	81%	**54%**	26%	10%	3%
Probability	75	99%	97%	92%	**82%**	68%	50%	33%
Total Wealth	85	98%	92%	79%	**57%**	34%	16%	6%
> $500,000	95	96%	86%	64%	**37%**	17%	6%	2%

Example: If you increase your spending plan by 10% then there is a 59% chance you will have more than $250,000 at age 85.

Monte Carlo simulations (Figure 2) tell a more complete story. John and Mary have an 85% likelihood of having more than $250,000 in 2003 inflation-adjusted dollars at age 85, which also means that they have a 15% chance of having less than their desired asset safety net. This can be a dangerous scenario depending on their health care costs in the next 15 to 20 years.

However, if they follow through with their goal to downsize in the next five years—save some housing and transportation expenses, as they believe they will, plus bank at least $100,000 from the sale into investments—their chance of success increases from 85% to 93%. Figure 2 illustrates how variable spending patterns can impact the likelihood of success or failure—for instance, decreasing their spending by 10% results in a 97% chance of success.

This suggests that it is critically important to carefully monitor expenses. It also suggests a critically important method of hedging against the risk of unexpected catastrophic expenses.

Although long-term care insurance is often discussed as one method of hedging against unexpected catastrophic expenses, I am neutral on whether they should buy this kind of coverage given the reduced living expenses they would incur versus added care expenses, plus the changing dynamics of this industry.

How do John and Mary fare in our three economic scenarios?

- The Lower Lows scenario would prove very troublesome and probably require a more modest future lifestyle.
- The Trading Range scenario is also a difficult story. Index funds would do quite poorly in this scenario, and bonds would need careful selection to avoid principal losses.
- In the Back to the Baby Boom scenario, they do just fine as you might imagine. This scenario will have a 4% or higher real rate of return in the next five years, which would provide ample cushion for John and Mary as they begin to withdraw more from their portfolio.

Issue #2: What investment allocation would provide the best result for John and Mary considering their desire to have lower stress than in the past?

With a goal of achieving a high likelihood of a 1% to 4% real return over the next 20 years and minimizing the volatility of returns that caused many of the Monte Carlo simulations to fail, I suggest the following allocation:

- Disciplined rebalancing of the portfolio is critical to their success. It is hard to sell what has done well lately and buy what hasn't done well—many investors find themselves doing exactly the opposite time and time again in both stocks and bonds. Good rebalancing decisions will account for at least two-thirds of John and Mary's future success in meeting their goals. We would consolidate a few of the mutual funds, but this accounts for much less of the success equation—get the big stuff right, and the little stuff won't matter much in the long run.
- Make sure that at least one-third of the large-cap

PORTFOLIO BREAKDOWN

Large-Cap U.S. Stock Funds		
Vanguard Total Stock Market	IRA	$4,792
Vanguard Total Stock Market (Viper)	IRA	4,869
Vanguard Growth	Annuity	5,011
Vanguard S&P 500 Index	Annuity	4,656
Vanguard Asset Allocation	IRA	16,490
Zweig Fund	IRA	48,200
Blue Chip Value	IRA	27,780
General American	IRA	18,992
Central Secs Corp	IRA	15,850
Tri-Continental	IRA	6,946
Masters Select Equity	Taxable	4,897
Zweig Total Return	Taxable	13,550
Copley Fund	Taxable	8,823
Total Large-Cap U.S. Stock Funds		**$180,856**

Individual U.S. Stocks		
Acxiom Stock	IRA	$1,448
IBM Stock	Taxable	58,232
meVC Draper	Taxable	4,130
AT&T	Taxable	9,350
Total Individual Stocks		**$73,160**

Mid- & Small-Cap U.S. Stock Funds		
Vanguard Strategic Equity	IRA	$18,929
Vanguard Ext Mkt Ix (VXF)	IRA	4,877
CGM Cap Develop	IRA	27,622
CGM Focus	IRA	2,973
Berwyn Income*	IRA	5,476
Babson Enterprise	Taxable	7,125
Perritt Micro Cap	Taxable	600
Mutual Discovery Fund	Taxable	5,212
CGM Focus	Taxable	21,350
Total Mid- & Small-Cap Stock Funds		**$94,164**

International Stock Funds		
Vanguard Totl Intl Stk Ix	IRA	$12,791
Masters Select Intl	IRA	8,582
Mutual Series Europe	IRA	4,268
Templeton Dragon	IRA	11,316
Gabelli Global Fund	IRA	4,487
European Warrant	IRA	2,170
iShares Tr MSCI	Taxable	4,703
Total International Stock Funds		**$48,317**

Short-Term Bond Funds		
Vanguard Short-Term Corp	IRA	$20,862
Schwab ShrtTrm Bd Ix	Taxable	15,141
Vanguard Short-Term Corp	IRA	10,014
Vanguard Short-Term Bd Ix	IRA	15,414
Fidelity Short-Term Bond	Taxable	15,011
Total Short-Term Bond Funds		**$76,442**

Intermediate- and Long-Term Bond Funds		
Vanguard Int-Term Bd Ix	Taxable	$5,165
Schwab Ttl Bd Ix	Taxable	5,161
iShares Tr 7 10y (IEF)	IRA	5,107
BRT Realty Trust	IRA	4,056
Berwyn Income*	IRA	5,476
Fidelity New Mkts	Taxable	19,818
Harbor Bond Fund	Taxable	10,001
Zweig Total Return	Taxable	13,550
PIMCO Mun Inc II	Tax Free	14,420
PIMCO NY Mun	Tax Free	6,720
Vanguard Total Bd Ix	Annuity	1,552
LoomisSayles Bond	Taxable	6,721
Total Inter- and Long Term Bond Funds		**$97,747**

Liquid Assets		
Vanguard Prime Reserve	IRA	$56,409
Fidelity Cash	Taxable	9,267
Schwab Cash	Taxable	4,491
Vanguard Prime Reserve	Taxable	2,730
Schwab Cash	Taxable	56,200
CDC Nvest Funds	Taxable	13,500
Total Liquid Assets		**$142,597**

Total Investment Portfolio	**$713,283**

TAX STATUS BREAKDOWN

IRA Assets	$366,196
Taxable Assets	$314,728
Annuities	$11,219
Tax-Free Municipal Bonds	$21,140

ASSET ALLOCATION

Stocks	
Large-Cap U.S. Stocks	35%
Small- & Interm-Cap Stocks	13%
International Stocks	7%
Total Stocks	**55%**

Fixed Income & Cash	
Short-Term Bonds	11%
Inter- & Long-Term Bonds	14%
Cash	20%
Total Fixed Income & Cash	**45%**

**Balanced fund allocated between stock and bond holdings.*

stock funds have a history of doing well in sideways markets—Zweig fits this goal but also consider a fund like Clipper. Do the same with bond funds: Keep a balance of low expense funds and those that have a successful history of making tactical shifts, like Bill Gross (PIMCO) or Dan Fuss (Loomis Sayles). At least two-thirds of the current 20% in cash funds should be invested in funds like these, since it may be some time before zero-coupon bonds are attractive again to John.

- The 55%/45% mix of stocks/bonds is fine, but consider moving 10% of the stocks to a stock substitute. If we get good near-term rallies, reduce small-cap and large-cap stocks, and invest 10% of the portfolio in several high-yield bond funds like Vanguard High Yield and Northeast Investors Trust. These funds behave more like equities, but improve the risk vs. reward profile in sideways markets. This is a "heads you win and tails you break even" proposition over the next three years, given current yields and the prospects for an improving economy even in the Trading Range scenario.
- As IBM rallies in the next few years, trim holdings to 5% or less (3% would be ideal) to lessen the odds of a "surprise" on the downside. Writing covered call options may also achieve this goal and provide supplemental income.

Issue #3: What key estate issues arise after considering the future scenarios and investment allocation decisions?

One estate item should be addressed sooner rather than later. John believes that his three children (two of which are MBAs) can help Mary with investments after his death. Several decades of experience working with families in transition have taught us that it is a rare family that can work through these issues without major disagreements or even outright hostility. Considerable discussion on this point should be had with their financial planner and estate attorney, with some input from the boys, to make sure that a lifetime of careful planning isn't spoiled at a time when Mary will be least able to cope with family conflict. ✦