The substantial rise in stock prices of the past few years has left many to wonder whether they should adjust their portfolio allocations to help preserve their retirement nest eggs. In weighing this decision, clients should be aware of several basic principles of retirement investing that apply whether markets are up or down, tranquil or stormy.

Newspaper and magazine articles, Internet posts, bestselling books and academic studies bombard us with reminders to save for retirement. But another pressing issue receives less attention: How shall a client invest and spend wisely upon reaching retirement age? As Baby Boomers reach this age, a growing number seek clarity from Financial Advisors on this question. This paper looks at some of the key risks that retirees face and how to address them.

Beware the pitfalls
Many clients fear outliving their portfolios. Indeed, a key concern for 68% of those surveyed is ensuring that their assets will last a lifetime.1 Their apprehension reflects an erosion of the “three-legged stool” of retirement: Social Security, employer pensions and private savings.

• Social Security faces growing stress as the ratio of workers paying into the system to retirees collecting benefits continues to decline. Government will likely contain costs by reducing benefits, raising the retirement age or further taxing benefits.
• Recent accounting rule changes make traditional defined benefit plans more expensive for employers, hastening their disappearance.
• Historically low interest rates pose a challenge to retirees seeking income.

Faced with these challenges, Baby Boomers must manage their savings to last a lifetime and, ideally, to leave something for the next generation. Doing so requires care because:

Retirement investing is challenging and not well understood. Wealth managers have devised efficient approaches to asset accumulation, but have given far less thought to ensuring that retirees don’t outlive their savings.

The margin for error is slimmer now than in the past. Yesterday’s retirees could count on more generous pension and Social Security benefits. The fraying of these financial safety nets necessitates greater care in retirement investing.

Clients nearing retirement can benefit from avoiding these common pitfalls:

1. Overspending
2. “Playing it safe”
3. Failing to address longevity and inflation risk
4. Not adhering to a retirement plan

**Pitfall 1: Overspending**

Think of your life savings as a personal financial garden whose produce you can harvest to help pay for retirement. You can improve your chances of harvesting a lifetime income that grows with inflation by spending in moderation, diversifying broadly and following a disciplined asset allocation strategy. Those who draw down their wealth too rapidly risk depleting their savings.

How much may retirees safely spend? Many lack a clear sense. A survey asked pre-retirees over the age of 55 how much of their retirement savings they can safely spend each year without running the risk of exhausting their assets. Nearly four in ten said they could spend 7% or more per year and 15% felt they could spend 10-12% annually.

But, as explained below, the respondents most on target were the one in ten who estimated sustainable spending rates to be 5% or less. A 5% spending rate would mean that someone with $500,000 of savings spends $25,000 the first year of retirement and increases this amount with inflation in subsequent years. This rate may suit some retirees, but no single rate works for everyone. The sustainable rate of retirement spending depends on numerous factors, including:

- The age of the retiree(s)
- Their risk tolerance
- Their asset allocation
- Their desire to leave a sizable bequest

History shows that the sustainability of retirement spending also depends on how markets fare, particularly in the early years of retirement. Consider the hypothetical example of Bobbie, who is 95 years old. Bobbie retired at the end of 1972 at age 50 with $250,000 invested in a 50–50 stock/bond portfolio. If she had spent 3% of her portfolio the next year and then increased this spending in line with inflation, Bobbie’s spending would have grown from $7,500 in 1973 to $39,400 in 2016. Her portfolio would have lasted until today, four decades later, growing in value from $250,000 to $1,500,000 (Table 1).

The value of Bobbie’s portfolio would have evolved differently at other spending rates. At lower rates, it would have appreciated more rapidly (Exhibit 1). But at a spending rate of 5%, it would have been exhausted after 22 years. The higher the spending, the less time the portfolio would have lasted.

These results reflect the fact that 1972 was a challenging time to retire. Stocks fell 37% over the following two years. To add insult to injury, inflation over those two years was a cumulative 23%.

Now suppose that Bobbie’s cousin Billy had retired two years later, at year-end 1974, with the same size nest egg ($250,000), also divided 50–50 between stocks and bonds. Billy was far more fortunate than Bobbie. Billy missed the 1973–74 market debacle and earned solid returns at the start of his retirement.

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Notes: For details on underlying assumptions, see Notes to Figure 1. These hypothetical results are for illustrative purposes only and are not meant to represent the past or future performance of any specific investment vehicle. Investment return and principal value will fluctuate and, when redeemed, the investments may be worth more or less than their original cost. Source: Calculations by Global Wealth & Investment Management, Chief Investment Office.

2 Diversification and asset allocation do not ensure a profit or protect against loss in declining markets.
5 Each increase in prices forces retirees to spend more just to maintain their lifestyles. In fact, from the perspective of sustainability, each 1% increase in prices has the same impact as a 1% decline in the portfolio’s value.
For Billy, like Bobbie, low spending rates were sustainable and high spending rates were not (Exhibit 2, see next page). But the specific levels of wealth attained by the portfolios were quite different. If Billy had spent at the same initial 3% rate as Bobbie, his wealth at year-end 2016 would be $4.3 million, as opposed to Bobbie’s $1.5 million (Table 1). Bobbie’s retirement portfolio could sustain initial spending rates up to 4%, while Billy’s could sustain 6%.

These illustrations give some feel for the spending that a diversified retirement portfolio can sustain. Spending rates of 3% or less are likely sustainable, while those much above 5% may not be. Careful research confirms these observations.6 The sustainability of spending rates within the range of 3-5% depends on the period in question as well as the other factors noted above.

These examples help dispel the misconception that one can “spend” average returns, an example of the “Flaw of Averages.”7 Thus, although a 50-50 stock/bond portfolio earned 8.3% average annual returns net of fees from 1973 to 2016, its sustainable spending rate was far lower. To be sustainable, spending must be low enough to allow a portfolio the potential to grow with inflation. Even if the portfolio earned 8.3% each year without fail, had Bobbie spent this return, the portfolio’s value would have stagnated. From 1973 to 2016, the inflation-adjusted value of the portfolio and the constant income stream it generates would have eroded by 82%.

**Pitfall 2: “Playing it safe”**

A natural reaction to market turbulence is to “play it safe” by investing all or nearly all of a retirement portfolio in investment grade bonds or highly liquid, lower-risk investments like CDs, money market funds8 or Treasury bills. But this seemingly conservative approach could actually prove riskier for retirees than holding a more broadly diversified portfolio that includes equities.9

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7 In *The Flaw of Averages* (p. 11), Sam Savage observes: “Plans based on average assumptions are wrong on average.” Nobel laureate William Sharpe has dubbed planning based on averages “financial planning in fantasyland.”

8 An investment in money market mutual funds is not a bank deposit, and is not insured or guaranteed by Bank of America Corporation or any of its affiliates or by the Federal Deposit Insurance Corporation or any other government agency. Although money market mutual funds seek to preserve the value of your investment at $1.00 per share, it is possible to lose money by investing in money market mutual funds. Please see the prospectuses for a complete discussion of the risks of investing in money market mutual funds.

9 Asset allocation and diversification do not ensure a profit or protect against loss in declining markets.
New retirees should view themselves as long-term investors. For a 65-year-old couple, there is a 1-in-4 chance of at least one spouse living past 97 and a 1-in-10 chance of at least one spouse living to 100. (Exhibit 3). Funding a retirement that might last 30 years or more generally requires the higher long-run returns that equities have historically earned. We assume that stocks will continue to earn higher long-run returns than bonds (Table 2).

We believe there are solid reasons to expect stocks to outperform bonds and cash over time:
- From 1926 through 2016, U.S. stocks, as represented by the S&P 500 Index, earned an average annual return of 10.0%, compared to 5.7% for U.S. bonds. U.S. bonds are represented by a weighted average: 60% Ibbotson U.S. Long-Term Government Bond Index and 40% Ibbotson U.S. Long-Term Corporate Bond Index.
- Stocks have exhibited superior long-term performance in many other countries as well.
- Because stocks are riskier than bonds, investors require higher long-term returns from stocks. Absent this “risk premium,” investors would shun stocks.
How can retirees harness this uncertain long-run risk premium given that, as Keynes observed, “In the long run we are all dead”? Investing patiently and diversifying prudently can help. For example, a portfolio split evenly between stocks and bonds (as presented in Exhibit 1) realized negative returns in just four of the 25 years through 2016 (1994, 2001, 2002 and 2008) and lost more than 10% in just one year (2008, down 16.2%). Moreover, in each of these four instances, the portfolio recovered from its losses within two years. Of course, past performance is no guarantee of future results.

Many retirees wish to play it safe by avoiding stocks. But a portfolio of bonds and cash, despite producing stable returns year-to-year, may not be the best answer for retirees. A balanced portfolio that holds both stocks and bonds may offer retirees a far better chance of not outliving their wealth.

Consider the hypothetical example of a 65-year-old woman with $500,000 to invest who wishes to draw 4% income, or $20,000, next year and amounts that increase in line with inflation in subsequent years. If she invests the portfolio entirely in cash, she will have year-to-year return certainty but, according to our analysis, only a 41% chance of not outliving her wealth. If she instead invests entirely in bonds, this likelihood rises to 50% (Exhibit 4). But if she allocates half the portfolio to bonds and half to stocks and rebalances the portfolio annually, her chances of not outliving her wealth rise to 76%.

Pitfall 3: Failure to adapt to uncertainty
Retirees can be blindsided by unanticipated risks. Many people need to retire sooner than expected or live longer than they imagined. Moreover, inflation can wreak havoc on a retirement plan, especially for those enjoying a long retirement.13

Timing of retirement
You may have in mind a retirement date and a plan to save enough by then. But there’s a good chance you might retire sooner than intended due to circumstances beyond your control. Roughly one-in-four (24%) workers plans to retire before age 65, yet more than two-thirds (69%) of current retirees ended up doing so. What explains this disconnect?

More than half of those who retire sooner than expected do so because of a health problem or disability; for more than a quarter, the cause is a business downsizing or closure.14

The strong possibility of retiring earlier than expected heightens your need to be well prepared, or even over-prepared. In planning for retirement, save early—and save often. If you find yourself among the many who retire sooner than expected and your wealth must last longer than originally anticipated, you may need to revisit your work options and spending plans.

Length of retirement
Many retirement plans assume a fixed time horizon, such as 30 years. This approach has two basic shortcomings. First, in most cases the planning horizon takes no account of a client’s actual life expectancy. Second, even if the planning process does take the client’s life expectancy into account, it may do so incorrectly. How, for example, should you plan for a remaining lifespan that may be 20 years, but may also be 40 years?15 Being overly conservative may lead you to continue working longer than necessary in your current position or keep you from enjoying your retirement. But following an overly aggressive approach may cause you to retire too early or spend too freely, placing you at risk of exhausting your wealth.

13 For a more complete discussion of the key risks retirees face and ways to mitigate these risks, see David Laster, Nevenka Vrdoljak and Anil Suri, “Tackling Retirement Risks,” Chief Investment Office, Spring 2016.
14 Employee Benefit Research Institute, “2016 Retirement Confidence Survey.” EBRI also finds that 17% of those who retired earlier than expected cite the need to care for a spouse or other relative. According to a survey by the National Alliance for Caregiving and the AARP, 49 million Americans, or about 20% of the population, care for someone who is ill or aged. Caregivers provide 20 hours per week of care on average.
15 The uncertainty surrounding an individual’s lifespan, called longevity risk, is a key risk facing retirees.
Complicating matters is the difficulty many encounter in estimating their life expectancy. Retirees are far more likely to underestimate life expectancy (62%) than to overestimate it (19%).16 One reason for these underestimates is a failure to recognize that life expectancy increases with age. Another is that many people estimate their life expectancy based on how long their parents or other close relatives lived. Because life expectancies have grown markedly from one generation to the next, using relatives as a benchmark can lead people to underestimate their life expectancy.

Inflation
When planning for retirement, many do not adequately consider the corrosive long-term impact of inflation. For example, some Baby Boomers might recall that the price of a first class postage stamp was 4 cents in 1958. Today it costs 49 cents, a cumulative inflation rate of 1,125%. More generally, according to the Consumer Price Index (CPI-U), a typical basket of goods and services that cost $10 in 1958 cost $83 in 2016, an 88% erosion in the purchasing power of the dollar. Uncertainty regarding the ongoing rise of prices is known as inflation risk, another key risk confronting retirees. It is related to longevity risk because the longer a retiree lives, the more acute inflation risk becomes.

Inflation can spike suddenly. In the 1970s from 1972 to 1980, consumer prices more than doubled, imposing a serious burden on those living on a fixed income (Exhibit 5). Adding insult to injury, stocks and bonds have fared poorly in periods of high inflation.

Over the course of a long retirement, even moderate inflation can have a major impact. Inflation of 2.5% per year will erode purchasing power by 63% over 40 years (Table 3). Three decades of 5% inflation will reduce purchasing power by 77%. Moreover, retirees typically experience higher inflation than the headline CPI-U figure reported in the media. This is because retirees consume a different basket of goods and services than the general populace does. Notably, medical care expenditures have twice the relative importance for a retiree as for a pre-retiree. From 2000 through 2016, medical care inflation averaged 3.7%, as opposed to 2.1% for CPI-U. Aside from inflation, as people grow older, their healthcare expenses tend to rise.17

Table 3: Erosion in the purchasing power of the dollar at various rates of inflation

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<td>86%</td>
<td>93%</td>
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Source: Calculations by Chief Investment Office.

Pitfall 4: Not adhering to a retirement plan
People nearing retirement can benefit from sound retirement planning, a process that a Financial Advisor can facilitate. Planning can offer assurance and comfort to those on track to retire, and guidance on how to improve retirement prospects to those who are not. With a sound strategy in place, clients can make prudent decisions on such matters as when to retire, how much they can afford to spend, and when to start receiving Social Security. Many find that the very process of developing a retirement plan offers a heightened sense of well being.18

The need for a retirement plan
One of the greatest threats to a secure retirement is the failure to plan. Yet, remarkably, only 48% of workers surveyed report that they or their spouse have tried to calculate how much money they will need to live comfortably in retirement.19 Most retirees need income from their retirement savings to fund living expenses, making it crucial to have a sound plan. Moreover, some retirees face challenges such as unexpected healthcare expenses. These concerns distinguish retirement planning from financial planning for other stages of life.
Sticking to a retirement plan

Dalbar produces an annual study gauging the impact of investor behavior on long-term portfolio returns. The study shows that individual equity fund investors realized a 4.7% average annual return in the 20 years through 2015, compared to 8.2% for the S&P 500 Index. It concludes that the benefits of a long-term investment strategy are lost to the average investor, who generally abandons investments at inappropriate times, often in response to bad news.

What we believe gives investors the fortitude to stick with their retirement plans and hold investments despite market turmoil? Confidence that their plan is well thought out and suited to helping them pursue their goals. What we believe investors want most is not to beat some market benchmark or to outperform their peers. We believe that investors want to achieve their personal goals, nothing more and nothing less.

To help its clients work toward achieving their goals, Merrill Lynch has developed a Goals-Based Wealth Management (GBWM) approach and a related suite of tools, with specific applications for retirees. GBWM is designed to offer clients the confidence and courage to stay on course even when markets gyrate.

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20 Dalbar, Quantitative Analysis of Investor Behavior, April 2016. The study uses data from the Investment Company Institute and Standard & Poor’s to compare mutual fund investor returns to appropriate benchmarks. Covering the period from January 1, 1986, to December 31, 2015, the study uses monthly mutual fund sales, redemptions and exchanges to measure investor behavior. These behaviors reflect the “average investor.” Based on this behavior, the analysis calculates the “investor return” for various periods. These results are then compared to the returns of relevant indexes. Past performance is no guarantee of future results.

21 For some of the technical foundations of this approach and a case study of its application, see Hungjen Wang, Anil Suri, David Laster and Himanshu Almadi, “Portfolio Selection in Goals-Based Wealth Management,” Journal of Wealth Management, Summer 2011.
Overcoming the Pitfalls
Having examined four retirement pitfalls to which many are prone, let’s briefly recap and discuss some solutions.

**Overspending.** Most retirees have little idea how much of their savings they can safely afford to spend each year. The answer varies, but is generally on the order of 3-5%. Spending much more could put you at risk of reducing your retirement savings to a level that requires scaling back your lifestyle, perhaps substantially. If this amount seems inadequate, you might examine your spending patterns to identify which expenses are essential and which are discretionary. By eliminating or reducing some of the latter, it may be possible to reduce your spending rate to 3-5%.

Another possibility is to delay retirement. This need not mean continuing to work in your current position. It could be a “second act” career that allows you to work in a field or setting more to your liking. Indeed, a majority of older Americans with full-time career jobs move to a different job before exiting the workforce.21 Delaying retirement can help compensate for a retirement savings shortfall by providing: added income; medical benefits; a shorter retirement to finance out of pocket; more time to save and earn returns; and higher Social Security benefits, which are largely tax-exempt. Your Financial Advisor can help you weigh these options.

“**Playing it safe**” by shunning equities. A well diversified portfolio with appropriate allocations to stocks, bonds and cash investments has the potential to keep pace with inflation and grow in value. Investing a retirement portfolio entirely in bonds and cash may be counterproductive. If market fluctuations leave you uncomfortable, it may make sense to limit your equity exposure. But doing so may mean lower long-run returns, necessitating a lower spending rate. Your Financial Advisor has tools to help you determine what strategic asset allocation is most appropriate for your situation.22

**Longevity and inflation risks** are important examples of the subtle factors that can undermine your retirement security. Your Financial Advisor can help you craft a strategy that addresses these risks. This might include allocating some of your retirement portfolio to investments that can outpace inflation over time. Another possibility to consider is allocating some portion of your retirement savings to an immediate annuity, which can provide an income for life, regardless of how long you live.23

**Staying with your plan.** People are much more likely to adhere to a retirement plan if they feel comfortable with it. Your Merrill Lynch Financial Advisor can help you structure your retirement portfolio in a way that helps you pursue your long-term financial goals, providing you the fortitude to stick with your plans even when markets turn stormy.

Just as you will get more out of retirement by staying physically fit, staying financially fit and avoiding these pitfalls can help you get more out of retirement. Your key to a secure retirement is a plan that helps you meet your financial goals.

David Laster, Managing Director, Head of Retirement Strategies, is responsible for developing analytical solutions and thought leadership in the area of retirement investing. His research has appeared in the Financial Analysts Journal, Journal of Investing and Journal of Wealth Management and has been discussed in The Wall Street Journal, Financial Times and Fortune. Before joining Merrill Lynch, David was an economist at Swiss Re and at the Federal Reserve Bank of New York. He also taught at Columbia Business School and NYU Stern School of Business. In 2013, David conceived of, and helped Institutional Investor Journals launch, The Journal of Retirement, a new quarterly sponsored by Bank of America Merrill Lynch. David earned a Ph.D. in economics from Columbia University and a B.A. in mathematics from Yale University. He is a CFA charterholder.

Anil Suri, Managing Director, Head of CIO Portfolio Analytics & Innovation Development Center, leads the development of frameworks and solutions for portfolio construction and management, retirement investing, Goals-Based Wealth Management, asset allocation, and performance measurement across traditional, market-linked and alternative investments. Anil has been with Merrill Lynch since 2004, where he previously led investment strategy development and analytics in the Alternative Investments area and was a Senior Investment Strategist on the Merrill Lynch Research Investment Committee (RIC). Anil’s research has been published in the Journal of Wealth Management and discussed in Barron’s and The Wall Street Journal. His prior experience includes roles as a senior AI strategist at Citigroup, trader at Credit Suisse and management consultant at McKinsey. Anil earned an M.B.A. with honors from the Wharton School of the University of Pennsylvania, an M.S.E. from Princeton University and a B. Tech. from the Indian Institute of Technology at Delhi.

Nevenka Vrdoljak, Director, Retirement Strategies, holds analytical responsibilities in the areas of asset allocation and retirement investing. Nevenka developed Merrill Lynch Wealth Management’s target date asset allocation approach for institutional plan sponsors. Her research has been published in the Journal of Wealth Management and Journal of Retirement. Previously, Nevenka held analytical roles at Goldman Sachs Asset Management (London) and Deutsche Bank Asset Management (Sydney) in the fixed income, currency and derivatives areas. She holds a bachelor’s and master’s in economics with honors from the University of New South Wales (Sydney). She was awarded an Australian Commonwealth Scholarship where she completed advanced studies in econometrics at Georgetown University. Nevenka graduated from Columbia University with a master’s in mathematics of finance.
Retirement Publications from the Chief Investment Office

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