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THE DECUMULATION PARADOX

Why Are Retirees Not Spending More?

By Todd Taylor, Nick Halen, and Dylan Huang



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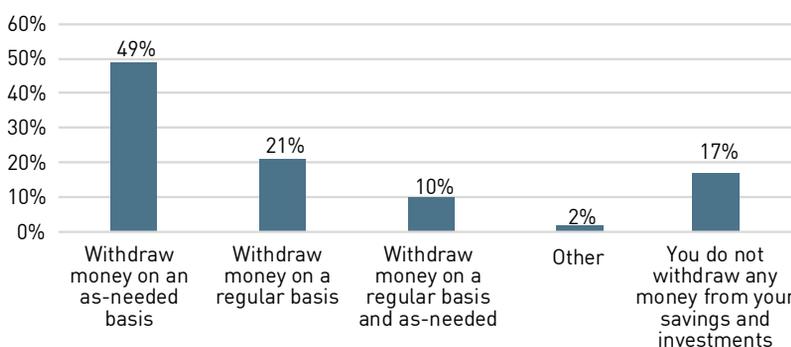
Most Americans work hard and save money in hope of supporting a long, happy retirement. For those not fortunate enough to receive income from a defined benefit pension plan, Social Security and portfolio assets are expected to fund a large portion of retirement consumption. Contrary to most financial planning assumptions, however, research shows that few retirees are systematically drawing down their retirement portfolios to supplement spending. Instead, many retirees are spending only guaranteed sources of income (e.g., Social Security and pensions) and dividends and interest earned on their portfolios. Some even continue to save in retirement.

The media focuses lots of attention on retirees' unpreparedness and insufficient funds. But among the affluent and mass-affluent demographics, many retirees are unnecessarily constraining spending and living well below their means. This phenomenon persists despite the fact that most U.S. retirees prioritize maintaining their pre-retirement lifestyles over leaving bequests and often have sufficient assets to cover unexpected costs. Research shows that retirees with some form of insurance spend more freely and that those without constrain spending and continue to save, which suggests that many are self-insuring their retirements and not practicing utility-maximizing behavior.

We contend that behavioral biases and predispositions prevent individuals from

Figure 1

RETIREE WITHDRAWALS FROM SAVINGS AND INVESTMENTS (2016-2017)



Source: Greenwald & Associates (2017), *Retiree Insights 2017 Survey of Consumers*

making optimal spending decisions in retirement. Financial advisors can and should help retirees overcome these biases and improve their quality of life.

MANY RETIREES DO NOT SYSTEMATICALLY WITHDRAW FROM THEIR RETIREMENT PORTFOLIOS

Standard life-cycle theory suggests that the sole purpose of saving is for future spending (Modigliani and Brumberg 1954). It also states that people want consistent or smoothed consumption and that the ideal outcome is the one where an individual's portfolio is fully depleted on that individual's last day of life.

Much of retirement drawdown research and basic planning advice of the past two decades has been predicated on the "4-percent rule," which states that 4 percent is a safe withdrawal rate for retirees in that it provides for steady income with virtually no chance of

running out of money across historical return scenarios, even when adjusting withdrawals for inflation (Bengen 1994).

However, actual retiree spending behavior appears to contradict these theories and rules, particularly among mass-affluent and affluent retirees, defined as individuals with non-housing financial assets of at least \$200,000. Greenwald & Associates (2017) shows that only 31 percent of retirees across all wealth levels withdraw from their portfolios on a regular, systematic basis; 17 percent do not withdraw any money from their accounts (see figure 1). Only 25 percent of the most affluent retirees—individuals with assets of \$2.5 million and more—withdraw from their portfolios on a systematic basis.

Greenwald & Associates (2017) also showed that of the retirees who are withdrawing from their portfolios, most are not tapping portfolio principal. Across

all wealth levels, 58 percent of retirees withdraw less than their investments earn, 26 percent withdraw up to the amount the portfolio earns, and 14 percent are drawing down principal.

Even when retirement expenses are more than expected, retirees still are reluctant to use portfolio assets to support spending. The 2017 Retirement Confidence Survey, conducted by the Employee Benefit Research Institute (EBRI), showed that when expenses are unexpectedly high, retirees are twice as likely to adjust their budgets or reduce consumption than to draw money from their investments (EBRI 2017, p. 26). Figure 2 shows that among retirees facing unexpected expenses, only 22 percent used portfolio assets to cover these additional costs, and 20 percent of respondents went into debt, went back to work, or received financial support from family members.

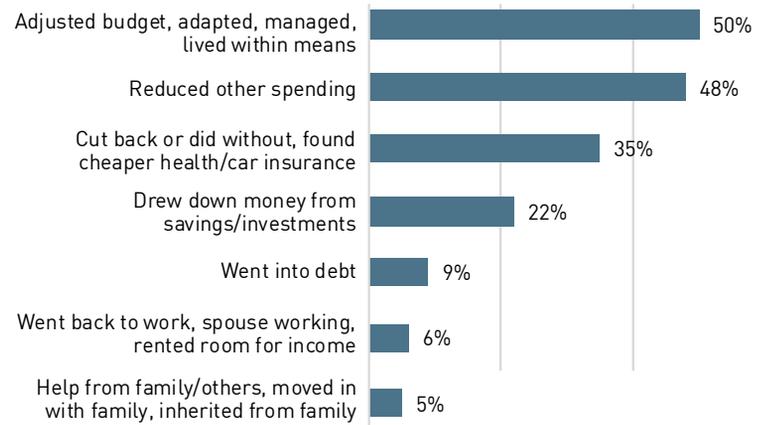
RETIREEES OFTEN MATCH SPENDING TO INCOME AND SOME CONTINUE TO SAVE

Wolfe and Brazier (2018) found that most retirees match spending to income, much like they did when working and accumulating assets for retirement. In the same study, EBRI (2018) found that roughly 18 percent of retirees across all wealth levels were spending more than their household income, but fewer than 15 percent of retirees with at least \$500,000 of non-housing assets were outspending their income.¹

So rather than determining their basic and discretionary expenditures and creating dynamic strategies to fund them, many retirees appear to be taking the opposite approach—determining their guaranteed and steady income sources and adjusting their lifestyles to fit within that budget. We define guaranteed income as the income provided by pensions, Social Security, etc.; and we define steady income to include dividends and interest earned from retirement accounts (IRA, 401(k), 403(b), post-tax brokerage accounts, etc.).

Figure 2

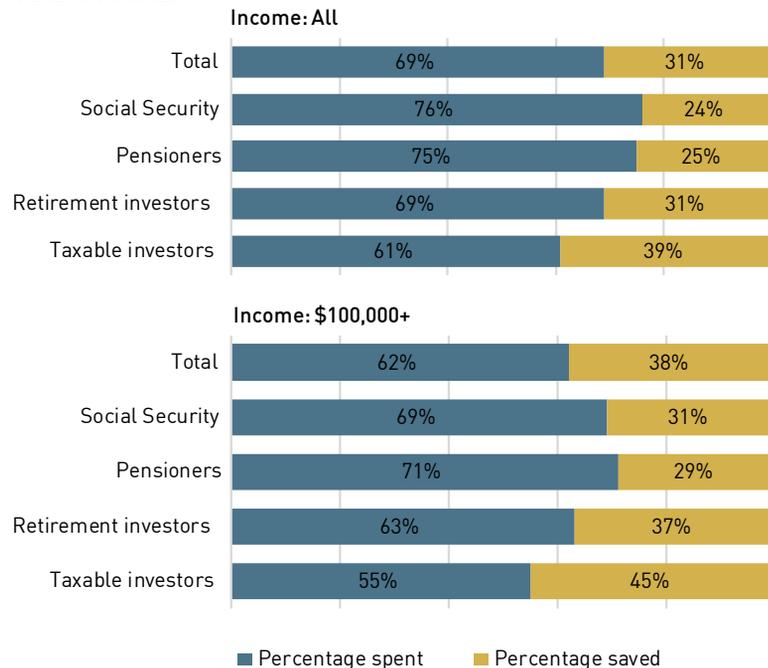
HOW RETIREES WITH HIGHER-THAN-EXPECTED EXPENSES COPE



Source: Employee Benefit Research Institute and Greenwald & Associates, 2017 Retirement Confidence Survey

Figure 3

AGGREGATE SPENDING AND SAVING BY RETIREE INVESTOR GROUP AND INCOME



Source: Madamba and Utkus (2015)

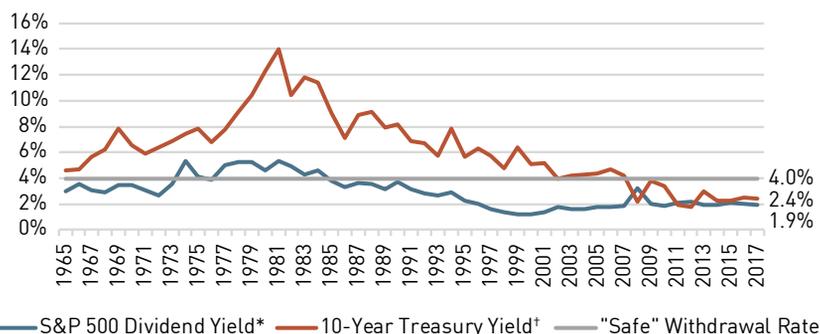
Many retirees also continue to save and accumulate wealth. Madamba and Utkus (2015) found that, on average, retirees across all wealth levels save 31 percent of their retirement income; retirees with more than \$100,000 of assets save 38 percent of their income (see figure 3). We acknowledge that these are averages, meaning some people likely save a lot, some spend down assets, and some match spending to income. These high percentages may be due to some

higher-net-worth retirees reinvesting annual required minimum distributions (RMDs) not earmarked for near-term expenses. Madamba and Utkus (2015) found that 40 percent of withdrawals from IRAs, employer plans, brokerage accounts, and mutual funds are reinvested.

EBRI (2018) found that this inclination to continue saving is leading to ongoing wealth accumulation in retirement. EBRI

Figure 4

CURRENT YIELDS ARE BELOW SAFE WITHDRAWAL RATES



*<http://www.econ.yale.edu/~shiller/data.htm>
†<https://fred.stlouisfed.org>

(2018) found that about one-third of retirees across all wealth levels had higher non-housing financial assets 17-18 years after retirement than they did at the point of retirement. The wealthiest retirees (identified as those with at least \$500,000 of non-housing assets) retained 88 percent of their assets two decades into retirement (at the median), and the middle (\$200,000 to \$499,999) and lower (less than \$200,000) wealth groups retained 73 percent and 76 percent, respectively. This parallels the finding that withdrawal rates for many retirees are lower than the returns generated by their portfolios. This is also in-line with Greenwald & Associates (2017), which found that 86 percent of retirees at the highest wealth level expect their investable assets to remain unchanged or increase in the next 10 years (67 percent expect assets to increase and 19 percent expect assets to remain unchanged from current levels).

AFFLUENT RETIREES COULD SAFELY SPEND MORE BUT DON'T

The reluctance to spend portfolio assets is leading to a consumption gap. Browning et al. (2016) found that retirees in the top quintile of financial wealth were spending nowhere near an amount that would put them in danger of depleting their portfolios over a 30-year retirement period.

Browning et al. (2016) compared available consumption (i.e., how much

spending a portfolio can support without depleting prematurely across various asset allocations and 3,000 Monte Carlo scenarios) to actual consumption and found that the wealthiest retirees had a consumption gap as high as 53 percent. Even after setting aside 40 percent of assets to cover unexpected medical expenses, longevity, bequests, etc., the consumption gap for wealthy retirees still reached as high as 47 percent. This means that retiree spending for this demographic cohort is about one-half of available consumption.³

SPENDING ONLY DIVIDEND AND INTEREST INCOME MAY BE A SUBOPTIMAL STRATEGY

In the past, individuals could maintain pre-retirement lifestyles in retirement by implementing an income-focused asset allocation strategy and spending only income generated from their portfolios because dividend yields and interest rates exceeded reasonable withdrawal rates (e.g., 4 percent). This strategy is becoming less effective, however, because yields on both dividends and interest-bearing investments have declined steadily over the years (see figure 4).

Baker et al. (2007) showed that investors are more willing to spend dividends than capital gains, despite there being no economic difference between the two. In our view, this is likely driven by retirees viewing dividend income in retirement similarly to

how they viewed (and consumed) labor income during their working years, as well as a misconception about how dividends affect total wealth.

Baker et al. (2007, p. 243) analyzed the effect dividends and capital gains have on consumption. They found that the propensity to consume dividends is significantly higher than the propensity to consume capital gains, and that the propensity to spend dividend income is similar to the propensity to consume labor income.

From a total wealth perspective, ignoring taxes and transaction costs, receiving and spending cash dividends is no different than selling shares of stock and then receiving and spending capital gains. Black (1976) questioned the true economic value of cash dividends. His doubts over their value centered around the point that the price of a dividend-paying stock drops on the ex-dividend date by about the amount of the dividend. This means the dividends a corporation pays do not affect the value of its shares or the net returns to investors, because the higher the dividend, the less the investor receives in capital appreciation.

RETIREE SPENDING CONSTRAINTS DO NOT ALIGN WITH PREFERENCES FOR INCOME OVER BEQUESTS

The reluctance of retirees to draw down portfolio assets is in many cases leading to further wealth accumulation in retirement. But leaving a legacy does not appear to be a high priority for most retirees. Findings made available in the 2018 Insured Retirement Institute (IRI) *Fact Book* show that retirees across all wealth levels prioritize a comfortable standard of living in retirement over leaving money to heirs. IRI found that 48 percent of retirees view maintaining a comfortable standard of living in retirement as their most important financial goal, whereas only 3 percent view leaving an estate as their primary goal (see figure 5).⁴ Among the wealthiest

retirees, i.e., those you would expect to prioritize leaving a bequest, the percentages do not change materially; nearly 40 percent are most concerned about quality of life in retirement, but only 4 percent view leaving an estate as their top priority.

These findings do not imply that retirees, particularly wealthy ones, have no desire to leave money to heirs; rather, the findings show that leaving an estate appears to be a lower priority and is more of a want versus a need. Thus many retirees can afford a higher quality of life, but most are unwilling to spend money to achieve it.

Nor do these findings mean that all retirees should spend down assets for the sake of maximizing consumption. Clearly some retirees are able to meet their needs and live comfortably off portfolio income and do not need to dip into principal. Other retirees, however, are not spending down assets and appear to be living below their means; it's not clear whether they are foregoing basic or necessary consumption or simply are not willing to splurge on discretionary expenditures.

BEHAVIORAL ECONOMICS MAY EXPLAIN THE HESITATION TO SPEND DOWN ASSETS

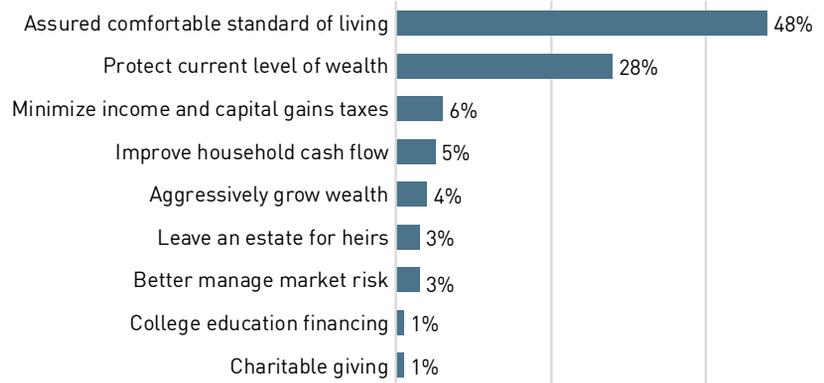
Behavioral economics shows that emotion drives a great deal of our actions—and inaction—with regard to our finances, even when the behavior is not in our own best interest. Numerous behavioral biases can impact retirement spending behavior. Research has shown that overcoming certain behavioral tendencies could increase accumulated retirement savings by up to 70 percent (Goda et al. 2015, p. 50).

A few behavioral biases that may help explain why retirees are hesitant to spend down their portfolios are listed below:

Loss aversion is the tendency to give more weight to the possibility of bad

Figure 5

RETIREES' MOST IMPORTANT FINANCIAL GOALS



Source: IRI Fact Book, 2018

outcomes than the possibility of good outcomes. Johnson (2010, p. 8) concluded that retirees display “hyper-loss-aversion” and are up to five times more loss-averse than the average person. One experiment showed that nearly half of retirees were unwilling to accept a gamble with a 50-percent chance of winning \$100 and a 50-percent chance of losing as little as \$10, suggesting they weighted losses about 10 times more heavily than gains. This hyper-loss-aversion may cause retirees to view withdrawing principal as a loss, whereas dividends and interest may be viewed as gains that can be consumed without reducing accumulated wealth.

Mental accounting is the tendency to put things into “buckets” or “mental accounts” rather than looking at the whole picture, making it easier to deal with things that are abstract or unknown. Behavioral economists surmise that households place wealth into one of three buckets: current income, current assets, and future wealth. As such, retirees likely view dividends, interest, and other steady income as current income that can be freely consumed without affecting total wealth (much like labor income), whereas capital gains and principal may be viewed as current assets that are to be held for purposes other than consumption.

Familiarity bias is the tendency to stick with what you know and are comfortable

with. This tendency often makes people resistant to change. During one’s working years, people accumulate assets for retirement by spending less than they bring in and diligently saving over the course of several years. Rather than adjusting this behavior at retirement and becoming net spenders, which is an unfamiliar and uncomfortable feeling for many, retirees appear to continue to follow the accumulation mantra of “don’t spend more than you bring in.”

Endowment effect is the tendency to ascribe more value to things you own and an unwillingness to give them up, even when presented with better options. Many people have a specific wealth or savings goal and develop an attachment to this wealth when they retire. This attachment may prevent retirees from spending down those assets.

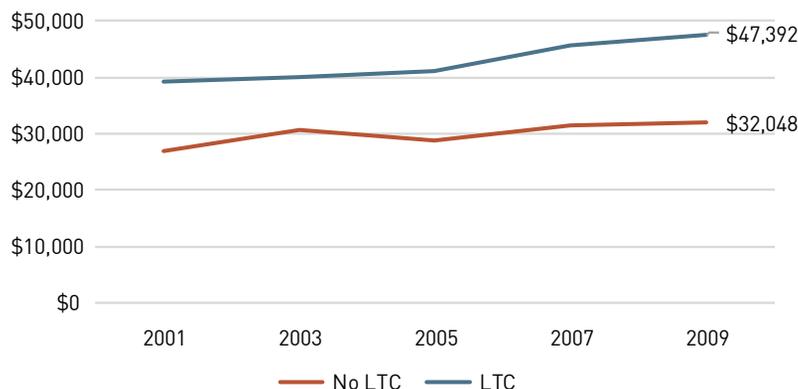
Declinism is the tendency of people to view the past more favorably than it really was and the future more negatively than it likely will be. Retirees may have an irrational pessimism about the future and hold onto their money as a defense.

GUARANTEES HELP RETIREES COMFORTABLY SPEND MORE

Despite people’s aversion to spending accumulated savings, some groups of retirees are able to overcome behavioral biases and spend more freely. Two

Figure 6

MEDIAN HOUSEHOLD SPENDING FOR INDIVIDUALS WITH AND WITHOUT LTC INSURANCE, AGE 65+



Source: Banerjee (2012)

industry studies have shown that people with more guarantees in retirement tend to spend more than those with less. Madamba and Utkus (2015, pp. 7-9) found that retirees whose incomes are primarily guaranteed (i.e., from Social Security and pensions) spend roughly three-quarters of their incomes, and retirees who rely heavily on non-guaranteed sources of income (e.g., portfolio assets) spend about two-thirds of their incomes. This finding leads us to conclude that households with more guaranteed income are likely to spend more than those with less-certain sources of income.

Banerjee (2012, p. 13) found that having long-term care (LTC) insurance had a significant effect on spending by retired households. The analysis concluded that in 2009, people with LTC insurance coverage had median total household spending of roughly \$47,000, whereas those without LTC insurance spent only \$32,000 (see figure 6). These findings held even when running a regression controlling for income and wealth.

SPENDING AND SAVING BEHAVIOR SUGGEST RETIREES ARE SELF-INSURING

The finding that retirees with some form of insurance (e.g., pensions or LTC) spend more freely as others constrain spending and continue to save suggests that many are self-insuring their

retirements. De Nardi et al. (2015) concluded that a significant portion of all assets held in retirement are used to self-insure against the risk of high medical and death expenses. This conclusion was based largely on the finding that these expenses more than triple during the year of death and cause a significant reduction in total wealth, which would not occur if these expenses were insured. The Society of Actuaries (2017) also found that many elderly retirees save a portion of their retirement income in preparation for unexpected financial shocks. The study, which consisted of 62 interviews with individuals age 85 and older, found the following:

Most participants can live within their means. Often the Social Security check, and pension if there is one, is deposited into their checking account. They then try to keep the account afloat, often saving a little extra each month in case an emergency comes along.

The Society of Actuaries (2017) also found that, although many have figured out how to live on their incomes throughout retirement, few are prepared for the financial shock associated with a long-term care event.⁵

We contend that self-insuring one's retirement is not utility-maximizing behavior and is an inefficient means of

covering unexpected spending shocks. This is akin to foregoing homeowners insurance and choosing to set aside large sums to build a new home in case of a catastrophic event. A more efficient, practical approach is to pool that risk by purchasing insurance. Doing so allows one to spend more freely, knowing that liability is limited.

The reluctance to purchase insurance may be driven by a combination of inertia and misperception among retirees that most, if not all, insurance products are complex, confusing, and high-cost. Helping retirees understand how insurance products work, the value of guarantees in retirement, and how these guarantees improve outcomes may motivate them to take action and overcome spending obstacles. According to Harris (2018):

Ultimately, retirement security isn't just about having a nest egg, but it is also about having options for turning that saving into security. In the absence of viable insurance markets for long-term care, supplemental health care and annuities, the default option for seniors is to hoard their savings and hope they don't outlive their assets. That's a terrible way to retire.

ADVISORS CAN HELP RETIREES OVERCOME SPENDING OBSTACLES

Financial advisors can help retirees overcome obstacles that hinder them from living the life they say they want and have worked to achieve. In the past, defined benefit (DB) pension plans did this by providing a guaranteed income that retirees could not outlive. DB pensioners were immune to stock market volatility or interest rate fluctuations and never worried about running out of money. Employers provided these lifetime benefits by pooling longevity, capital market, and other risks among large cohorts of pensioners. Today, few employers offer DB plans and many offer defined contribution (DC) plans instead. Between 1998 and 2015, the percentage

of employers still offering traditional DB plans to new employees fell from roughly half to 5 percent (McFarland 2016). This private-sector shift to DC plans shifted the responsibility of turning assets to income onto the employee, and it is much harder to do on an individual rather than collective basis.

We believe that advisors can and should help clients understand how to spend down their assets to support prosperous retirements while being considerate of the additional risks retirees face. We believe that advisors can help clients who are unnecessarily living below their means by helping them boost their guaranteed and steady income. One strategy is to transfer a portion of a client's accumulated wealth (which we know retirees will not spend) to income-producing assets (which retirees are generally happy to spend).

Products that can generate retirement income include dividend-paying stocks, high-coupon bonds, real estate investment trusts (REITs), rental income, and income annuities (e.g., single premium immediate annuities, deferred income annuities, qualifying longevity annuity contracts). For clients who are hesitant to spend down assets, shifting toward income-producing assets can support higher spending and an improved quality of life in retirement.

Income annuities are viewed by some as critical components of retirement portfolios because they provide a source of guaranteed lifetime income that is uncorrelated with the capital markets. According to Pfau (2016, p. 8), "Income annuities provide reliable contractual guarantees for income that can create peace of mind and may support higher spending and legacy potential as part of an integrated strategy." Incorporating income annuities into retirement portfolios may mitigate certain retirement-specific risks (e.g., longevity, sequence of returns) and may help retirees overcome behavioral biases that may constrain spending.

From a portfolio allocation standpoint, bifurcating investments into those needed to fund consumption and maintain financial security versus those set aside for long-term growth can help retirees better understand how much of their total wealth is actually needed for living expenses. In many cases, affluent retirees have excess funds available for long-term growth that they could instead use for discretionary expenditures that help support the lifestyle they desire.

Proper decumulation planning combined with these products and strategies can help retirees confidently spend more. Scenario testing of market return sequences, asset allocations, spending levels, etc., can show how different circumstances may impact retirement outcomes. Thorough analyses that show retirees how much they can safely spend without portfolio depletion may help them feel more comfortable that their systematic withdrawals are sustainable.

CONCLUSION

Many retirees, particularly those in the affluent and mass-affluent demographics, are not spending down portfolio assets and are constraining spending to the point where they are living below their means. This is occurring even though most U.S. retirees prioritize maintaining their pre-retirement lifestyles over leaving bequests and often have sufficient assets to cover unexpected costs. The finding that retirees with some form of insurance do not exhibit the same constrained spending behavior suggests that many are self-insuring retirement risks (e.g., longevity, medical, LTC), which is economically inefficient versus risk-pooling techniques.

Inherent behavioral biases and predispositions appear to prevent individuals from spending more in retirement. Financial advisors can help retirees overcome these biases through proper decumulation planning and scenario testing, as well as the use of products

and strategies that turn accumulated wealth into steady retirement income. ●

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ENDNOTES

1. Consumption in this study was based on data available from the Health and Retirement Study (HRS), a nationally representative longitudinal dataset of Americans age 50 and older that has been administered by the University of Michigan on a biennial basis since 1992, and the Consumption and Activities Mail Survey (CAMS), a biennial survey distributed to a random subsample of HRS participants that measures total household spending over the previous 12 months.
2. Monte Carlo simulation is a sophisticated mathematical approach used within the financial industry to model possible outcomes of future investment scenarios. While this method may reflect the uncertainty and randomness of future events, it is important to understand that it is based on assumptions about the future risk and expected returns of each asset class. Projected ending values are shown in nominal (i.e., not inflation-adjusted) terms. The projections or other information regarding the likelihood of various outcomes are hypothetical in nature, do not reflect actual investment results, and are not guarantees of future results.
3. Actual consumption in this study was derived from the HRS and CAMS surveys discussed in endnote 1.
4. IRI used data obtained from the PMI Global Wealth Monitor™, which completes online surveys of 7,800 households throughout the year and is the largest study in the affluent in the United States.
5. Interviewees consisted of a mix of elderly participants, children of elderly parents or

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in-laws, and dyads (two-person groups) consisting of elderly participants and their adult children. To qualify for the research, the elderly participants or parents needed to be age 85 or older, with one-third older than age 90. The participants were also a combination of married and unmarried individuals and those with financial assets of more and less than \$50,000; all had less than \$400,000 in assets, and no more than two per location had more than \$400,000 in equity in their houses. Participants could not have pension income of more than \$2,500 per month.

REFERENCES

- Baker, Malcolm, Stefan Nagel, and Jeffrey Wurgler. 2007. The Effect of Dividends on Consumption. *Brookings Papers on Economic Activity, Economic Studies Program, The Brookings Institution* 38, no. 2007-1: 231–292.
- Banerjee, Sudipto. 2012. Expenditure Patterns of Older Americans, 2001–2009. *Employee Benefit Research Institute*. https://www.ebri.org/pdf/briefspdf/EBRI_IB_02-2012_No368_ExpPttns.pdf.
- Bengen, William P. 1994. Determining Withdrawal Rates Using Historical Data. *Journal of Financial Planning* 7, no. 4 (October): 171–180.
- Black, Fischer. 1976. The Dividend Puzzle. *Journal of Portfolio Management* 2, no. 2 (winter): 5–8.
- Browning, Chris, Tao Guo, Yuanshan Cheng, and Michael S. Finke. 2016. Spending in Retirement: Determining the Consumption Gap. *Journal of Financial Planning* 29, no. 2 (February): 42–53.
- De Nardi, Mariacristina, Eric French, and John Bailey Jones. 2015. Couples' and Singles' Savings after Retirement. University of Michigan Retirement Research Center (MRRRC). <http://www.mrrc.isr.umich.edu/publications/papers/pdf/wp322.pdf>.
- Employee Benefit Research Institute (EBRI). 2017. The 2017 Retirement Confidence Survey: Many Workers Lack Retirement Confidence and Feel Stressed about Retirement Preparations. https://www.ebri.org/pdf/briefspdf/EBRI_IB_431_RCS.21Mar17.pdf.
- . 2018. Asset Decumulation or Asset Preservation? What Guides Retirement Spending?: pp. 5, 7, 9. https://www.ebri.org/pdf/briefspdf/EBRI_IB_447_AssetPreservation.3Apr18.pdf.
- Goda, Gopi Shah, Matthew R. Levy, Colleen Flaherty Manchester, Aaron Sojourner, and Joshua Tasoff. 2015. The Role of Time Preferences and Exponential-Growth Bias in Retirement Savings. NBER Working Paper 21482 (August). <http://www.nber.org/papers/w21482>.
- Greenwald & Associates/The Diversified Services Group. 2017. Retiree Insights 2017 Survey of Consumers: p. 54.
- Harris, Benjamin. 2018. Retirement Insurance Products Are Disappearing. And That's Dangerous. *Wall Street Journal* (April 13). <https://blogs.wsj.com/experts/2018/04/13/retirement-insurance-products-are-disappearing-and-thats-dangerous/#livefyre-toggle-BL-258B-8212>.
- Insured Retirement Institute. 2018. *Fact Book: A Guide to Information, Trends, and Data in the Retirement Income Industry*: 112.
- Johnson, Eric. 2010. Hyper-Loss Aversion: Retirees Show Extremely High Sensitivity to Loss, but Shy Away from Guarantees That Require Giving Up Control. In Shlomo Benartzi, "Behavioral Finance and the Post-Retirement Crisis." Allianz Global Investors: 8. <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.365.8117&rep=rep1&type=pdf>.
- Madamba, Anna, and Stephen Utkus. 2015. Spending and Saving in Retirement. Vanguard: 5–6. <https://institutional.vanguard.com/VGApp/iip/site/institutional/researchcommentary/article/InvResSpendingSavingRetire>.
- McFarland, Brendan. 2016. A Continuing Shift in Retirement Offerings in the *Fortune* 500 (February 18). <https://www.towerswatson.com/en-US/Insights/Newsletters/Americas/insider/2016/02/a-continuing-shift-in-retirement-offerings-in-the-fortune-500>.
- Modigliani, Franco, and Richard Brumberg. 1954. Utility Analysis and the Consumption Function: An Interpretation of Cross-Section Data. In: Kurihara, K. K., *Post-Keynesian Economics*. New Brunswick, NJ: Rutgers University Press: 388–436.
- Pfau, Wade. 2016. Building Integrated Retirement Income Strategies with Traditional Investments, Guaranteed Income Annuities, and Whole Life Insurance. <http://www.jefferystill.com/files/88724/Integrated%20Retirement%20Income%20Strategies.pdf>.
- Society of Actuaries. 2017. Post-Retirement Experiences of Individuals 85+ Years Old: A Report on Sixty-two In-Depth Interviews in the United States and Canada: 23.
- Wolfe, Bruce, and Robert Brazier. 2018. Spending in Retirement ... or not? BlackRock Retirement Institute. <https://www.blackrock.com/investing/retirement/blackrock-retirement-institute/savings-and-investing/spending-in-retirement>.

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