



Life-Cycle Funds and Retirement Savings Elections

Patrick J. Collins, PhD, CLU, CFA

A Note from the Editor

All of us have a fiduciary responsibility to our clients, which is even more evident when working with qualified plan assets. As a fiduciary, the asset options available need to be diversified sufficiently to allow for any employee to elect a combination of assets that will give the employee a portfolio that will meet his or her investment goals. Lifestyle and fund-of-fund mutual funds offer an opportunity to choose one fund to meet a particular goal. Does the investor believe that his or her goals will be achieved by the mere purchase of this style fund? And, if goals are not achieved, will he or she understand that this was not necessarily the fault of the investment as much as a combination of time in the market, actual market return, inflation, and possibly an inaccurate analysis of the goal? At what point does fiduciary responsibility end and investor responsibility begin?

Patrick Collins has written an insightful article on the fiduciary responsibility of the plan provider in choosing the optimal investment mix for qualified plans. Will investors become too reliant on the description of their investment and forget to evaluate their point-in-time issues as they relate to that investment? To quote Jawaharlal Nehru, "The policy of being too cautious is the greatest risk of all."

—Stephanie J. Curry

Plan sponsors considering adding life-cycle funds to a firm's retirement plan menu are currently faced with a difficult evaluative decision. Life-cycle funds share the following characteristics:

- fully articulated portfolios
- diversified across several asset classes
- allocated according to prespecified risk/return objectives

Vendor marketing efforts generally emphasize several alleged advantages of life-cycle funds:

- Fully articulated portfolios reduce participant choice to a single selection option.

Participants no longer need to figure out how to assemble a portfolio from a variety of component building blocks.


- Portfolios achieve adequate diversification either through a "fund-of-funds" approach or by portfolio construction techniques designed to provide sufficient exposure to a variety of capital markets.
- The funds eliminate the sometimes difficult-to-communicate concept of asset allocation (weighting investments to calibrate the portfolio to a participant's risk preferences). Life-cycle funds, it is claimed, provide investors with portfolio selections that are on or near the "efficient frontier."

Thus the underlying and sometimes implicit claim of life-cycle fund vendors is that the fund program enables plan participants to address successfully the complex problem of retirement investing under conditions of uncertainty.

According to an analysis by the Vanguard Fund Group, there are two types of life-cycle funds:

- **Targeted Maturity Funds.** These target a retirement year and then change their asset allocations from aggressive to conservative as that date approaches. The final allocation is intended to see the investor through retirement.
- **Static Allocation Funds.** These funds maintain a defined asset allocation. They are typically offered in sets ranging from aggressive to conservative, with the investor determining which portfolio is appropriate for his or her circumstances at any given time.¹

The marketing nomenclature, however, is not standardized across the financial products industry. Sometimes the targeted maturity funds are distinguished from static allocation funds by terms such as "life-cycle" versus "lifestyle" or some other such label; at other times, a common designa-



In certain respects, the availability of life-cycle funds increases rather than decreases the fiduciary's burden.

tion is employed for both types of funds.

Our limited review of marketing literature (i.e., vendor-produced articles appearing in trade association magazines) suggests that the targeted maturity funds are designed for participant groups that either lack investment education programs or lack sufficient language proficiency, educational acumen, motivation, or time to make retirement savings and investment decisions. The static allocation funds, by contrast, require plan participants to assess their personal preferences, constraints, and risk aversion prior to selecting the fund. Marketing of static allocation funds assumes a participant group that is both more capable and willing to consider the problems of investing for retirement.²

The controversy surrounding the election to include life-cycle funds on a retirement plan menu includes:

The Agency Problem

An agency problem is a potential conflict of interest between the agent (in this case, the mutual fund company) and the individual(s) to whom the agent owes certain duties or to whom the agent contracts to undertake certain responsibilities. A classic agency problem in the actively managed segment of the mutual fund industry is the tension between fund shareholders who wish to achieve a successful financial outcome at limited risk to their nest eggs and fund managers who wish to achieve marketing advantages by outperforming peer group funds. With respect to life-cycle funds, it is sometimes alleged that mutual fund companies place poorly performing funds into a “fund-of-funds” package hoping to short-circuit the likelihood that the weaker components of the larger structure will come under strong evaluative scrutiny. This problem has several dimensions:

- From the participant’s point of view, the automatic rebalancing required to maintain internal asset allocation targets has the perverse economic consequence of rewarding poor fund performance.
- From the plan fiduciary’s perspective, the lockup of funds into a bundled structure

may prohibit efficient monitoring and surveillance of the plan’s investments and may constrain the ability to apply commonly used tools and techniques of investment performance evaluation, or may constrain the ability of fund sponsors to take corrective measures to protect the interests of plan participants and beneficiaries.³

The Capital Sufficiency Problem

Targeted maturity life-cycle funds start with a generally plausible assumption that younger plan participants lack sufficient wealth to sustain consumption, gifting, and bequest preferences throughout the applicable planning horizon. However, the funds assume that participants who are closer to retirement age have attained or are about to attain capital sufficiency. Stated otherwise, the funds’ asset allocation algorithms are calibrated to optimize for terminal wealth rather than sustainable consumption over the retirement period. The question of whether the amount of dollar wealth is sufficient to justify a predominately fixed-income portfolio (with lower expected returns) is, however, a critical issue ignored by the funds. The fundamental issue for an individual contemplating retirement is the issue of feasibility. As one commentator puts it:

“A feasible retirement date is when the present value of assets equals or exceeds the present value of liabilities. Investors with a substantial surplus tend to be more risk tolerant than investors with asset values close to liability values. But asset values go up and down, and liability values change merely because of the passage of time... Planning around averages tends to lead to financial tragedies because people must live with actual results, not average results. Additionally, liability values are as volatile as asset values and can suddenly increase or decrease based on changes of health, marital status, rates of inflation, and so forth. Values that change randomly are said to be random or stochastic variables. Thus, we reformulate the retirement income problem (How should I invest

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Life-Cycle Funds

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Although the life-cycle funds claim to mitigate the risks of underdiversified or inefficient portfolio allocation, many, if not most, retirees perceive risk in terms of the likelihood of running out of money in old age.

my money? How much income can I have without running out of money?) as follows: *A successful retirement is possible when the stochastic present value of assets equals or exceeds the stochastic present value of liabilities.*"⁴

Although the life-cycle funds claim to mitigate the risks of underdiversified or inefficient portfolio allocation, many, if not most, retirees perceive risk in terms of the likelihood of running out of money in old age. Redefining risk along these lines makes it clear that the life-cycle fund solution may be neither comprehensive nor rational. Technically, this amounts to acknowledging that there is no closed-form investment algorithm for optimizing the participant's asset allocation. The task, however, is more tractable to a systems engineering approach than an architectural approach. Given the nature of the retirement investing problem, two critical issues with respect to life-cycle funds present themselves:

- Is there fiduciary liability for including a set of funds on the menu which, in the eyes of unsophisticated plan participants, may imply that retirement security is merely a function of product selection?
- How well is the participant served either by forcing the portfolio toward lower expected return assets as retirement age approaches (the targeted maturity fund approach) or by placing labels such as "aggressive," "balanced," "conservative," and so forth on a menu of static allocation funds?⁵ A number of academic studies suggest that most retirees faced with uncertain rates of inflation, uncertain life spans, and uncertain economic shocks to their precautionary savings are better served holding portfolios tilted toward equities until rather late in life.⁶

The Investor Utility Problem

Life-cycle funds provide asset allocation according to a traditional model of investment advice based on the Life-Cycle Risk Aversion

Hypothesis, which assumes that the longer an investor's time horizon, the more risk the investor is both able and willing to tolerate. The hypothesis generalizes planning recommendations that encourage younger investors to own a more risky portfolio and move toward a more conservative portfolio as they grow older.⁷ The theoretical assumptions underlying this hypothesis remain controversial.⁸ Recent academic research in this area incorporates the effects of labor income, habit formation (becoming accustomed to a preestablished standard of living), education, and other factors. One intuitively appealing assumption is that younger workers can assume more risk because, if their investment expectations are not realized, they have the ability to adjust their living standards and trade leisure for increased wages and savings. Adopting a set of life-cycle funds into a retirement plan menu based on the Life-Cycle Risk Aversion Hypothesis may, however, be difficult to justify. Problems occur in at least two dimensions: (1) Empirical evidence does not always conform neatly to the hypothesis. Consumer surveys reveal that the proportion of risky assets held by investors relative to their total wealth actually increases with age.⁹ As wealth increases, the ability and willingness to assume risk also increases by some additional factor. Economists suggest that a consumer's risk aversion function is kinked rather than continuous and, if consumers develop a surplus, they become risk seeking; alternately, if they move toward a subsistence level of wealth, they become risk avoiding. (2) The nature of labor income (as opposed to time horizon) seems to be of special importance in formulating and implementing portfolio selection decisions. Under most models, total human wealth is the sum of labor wealth (the present value of future earnings) plus financial wealth. Over time, labor wealth is converted into financial wealth (hopefully, at a rate sufficient to support retirement consumption and bequest objectives). Consider,

however, two plan participants.¹⁰ Participant One is an MBA working for a company with high turnover in the mid-executive employee group. The labor income of this employee may correlate highly with equity—experiencing sudden jumps in a perhaps discontinuous process¹¹ as he or she moves from employer to employer. Participant Two is a semiskilled worker hired into an employee group where industry labor demand should remain steady but labor costs are relatively static, perhaps increasing only slightly above the future rate of inflation. This worker's income correlates more strongly with a bond. All else equal, Participant One would prefer to hold bonds in the investment portfolio to offset the equity characteristics of labor income; Participant Two would prefer to hold equity in the investment portfolio to offset the bond characteristics of labor income.¹²

Although many of the marketing claims made by life-cycle fund vendors are correct, the plan fiduciary must recognize that the funds are not likely to offer credible and comprehensive solutions to the retirement investment problem. Thus, the availability of life-cycle funds may increase rather than decrease the fiduciary's burden. Should prefabricated products substitute for investment education? Should participants be encouraged to take a suboptimal path to avoid the likelihood that they might suffer financial catastrophe for want of such a path? Are simplified investment elections good substitutes for superior investment alternatives that may seem opaque to many plan participants? ■

Notes

1. "Funds for Retirement: The 'Life-Cycle' Approach," The Vanguard Group, Inc. (2004), p. 1.
2. See, for example, Farley, Daniel, "The Place for Lifestyle Funds in a 401(K) Plan," State Street Global Advisors, www.ssga.com/library/povw/dan-farleyplaceforlifestylefunds20030610/page.html. The Vanguard brochure, cited above, advances the proposition that a plan offering a static allocation fund "would need to engage in substantial education to ensure that participants chose new portfolios as their risk tolerance and time horizon changed." By contrast, targeted maturity funds "would require fewer participant decisions and, therefore, less education, all else being equal," p. 6.

3. Hall, Anders W., "Disadvantages of Lifestyle Funds," Hewitt Investment Group (Southern Employee Benefits Conference, April 25, 2000).
4. Collins, Patrick J., "Solutions for the Retirement Income Quandary," *Retirement Counseling*, Society of Financial Service Professionals (December 2005), p. 5.
5. An important extension of this issue lies in the lack of consensus among fund managers as to what allocation actually is appropriate for a "conservative" or "aggressive" fund.
6. See, for example, Milevsky, Moshe A., Ho, Kwok, and Robinson, Chris, "Asset Allocation via Conditional First Exit Time or How to Avoid Outliving Your Money," *Review of Quantitative Finance and Accounting* (Vol. 9, 1997), pp. 53–70.
7. See, for example, "Schooley, Diane K., and Worden, Debra D., "Investors' Asset Allocations versus Life-Cycle Funds," *Financial Analysts Journal* (September/October 1999), p. 38.
8. Paul Samuelson, in a famous paper, argued, assuming random-walk investment returns, that investors with constant relative risk aversion could maximize expected utility only by maintaining a constant proportion of risky and risk-free assets irrespective of age (Samuelson, Paul A., "Lifetime Portfolio Selection by Dynamic Stochastic Programming," *Review of Economics and Statistics* [August 1969] pp. 239–246).
9. See, for example, Wang, Hui, and Hanna, Sherman, "Does Risk Tolerance Decrease with Age?" *Financial Counseling and Planning* (Vol. 8, 1997), pp. 27–31.
10. The following example is based, in part, on Van Eaton, Douglas, and Conover, James, "Equity Allocations and the Investment Horizon: A Total Portfolio Approach," *Financial Services Review* (Vol. 11, 2002), pp. 130–131. The authors conclude: "An asset allocation strategy that focuses only, or primarily, on the length of an investor's investment horizon may lead to poor results for that investor if other important factors are ignored," p. 118.
11. One thinks, for example, of longer-term pregnancy leaves and absent moves to change employers.
12. An excellent discussion of portfolio choice and labor income is found in Davis, Steven J., and Willin, Paul, "Income Shocks, Asset Returns, and Portfolio Choice," *Innovations in Retirement Financing*, edited by Olivia Mitchell, Zvi Bodie, and Stephen Zeldes (University of Pennsylvania, 2002), pp. 20–49.

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