

# Life Cycle Investing

## Revisiting an Old Planning Approach

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An old idea has been attracting a great deal of attention lately in the financial planning community. The theoretical impetus for what is now called “life cycle investing” goes back to a pair of articles published by economists Paul Samuelson and Robert C. Merton almost 40 years ago (“Lifetime Portfolio Selection by Dynamic Stochastic Programming,” *Review of Economics and Statistics*, August 1969 and “Lifetime Portfolio Selection by Dynamic Stochastic Programming: The Continuous Time Case,” *Review of Economics and Statistics*, August 1969, respectively).

One of the difficulties theoreticians found at the time with the modern portfolio theory developed by Harry Markowitz and William Sharpe was that it rested on the theoretical foundation of the Markowitz portfolio selection model. The Markowitz model is a relatively simple nonlinear programming model designed to maximize wealth over a single time horizon. Dynamic stochastic programming models as envisioned by Samuelson and Merton were designed to maximize consumption over a lifetime rather than maximize wealth over a single period. For the past 50 years, asset allocation models based on the Markowitz portfolio selection model and the capital asset pricing theory have carried the day in applications; “alpha,” “beta,” and “R-squared” have become part of everyday financial planner’s lexicon.

### What Is Life Cycle Investing?

In the world of financial theory, the quest for a multi-period, consumption-maximizing portfolio selection model is ongoing, but a robust theoretical model remains to be fully developed. While the mathematics of dynamic stochastic pro-

gramming is not understood by many, attempts at applying the theory have generated several clear and intuitively appealing conclusions relevant to financial planners. The first of these is that “human capital” should be balanced with

Life cycle investing theory should not be confused with the “target date” funds currently marketed by mutual fund companies. These are two entirely different concepts. In life cycle investing, a person’s total wealth is defined as the sum of current financial wealth and pre-



“financial capital” when planning an individual’s investment accumulation and decumulation. Recently, Paula H. Hogan, a CFP and CFA, presented a convincing case supporting the use of life cycle investing concepts (“Life-Cycle Investing Is Rolling Our Way,” *Journal of Financial Planning*, May 2007; “Human Capital and the Theory of Life-Cycle Investing,” *American Association of Individual Investors Journal*, May 2008).

sent value of human capital, where human capital is defined as the present value of future earned income. Viewed from this perspective, an individual’s job, employment stability, and earning potential should strongly influence her investment strategy.

Another tenet of the life cycle investing theory is that people generally like to smooth consumption across their lifetimes, and they especially want to avoid big downturns in their standard of living. Using

this approach, financial planning consists of transferring consumption across time and across contingencies throughout the life cycle of the individual. There are at least two cycles to be considered: the cycle of accumulation and the cycle of withdrawal (decumulation). Certain techniques are used to smooth out the cycle of accumulation, including life insurance, disability insurance, and health insurance. During the cycle of withdrawal, however, some form of immediate annuity products may be used to ensure that individuals will not outlive their resources. Although annuities have long been viewed negatively by many financial planners, experience has shown that many individuals without the luxury of a defined benefit retirement plan are extremely concerned about longevity risk. An immediate annuity can be a valuable option to reduce the risk of individuals' funds expiring before they do.

Human capital, and the resiliency of that capital, enter into the risks taken during the accumulation phase. If an individual has the ability to greatly increase his income, he can assume more risk and have a larger equity allocation in his portfolio than an individual with an income that is not resilient. On the other hand, if his income is not resilient, or if his income is reduced, his portfolio may have to be more conservative in order to match high financial capital risk with high human capital risk. The resiliency of human capital impacts savings for retirement and investment of those savings. Conventional wisdom says that if there is a long period of time until retirement, a heavier weight can be given to equity investments. Life cycle investing focuses on human capital and financial capital, indicating that under some circumstances, conventional wisdom may not hold.

Life cycle investing presents a different view of risk. Fixed income vehicles, and even specialized annuity products, may play a larger role in asset allocation modeling than under other approaches. When following the life cycle investing theory, personal wealth may need to be anchored by these relatively low-risk investments rather than by equity investments. This differs from the notion that stocks should always be the mainstay of an individual's portfolio. Of course, this theory does not account for any inheritances or other windfalls that would provide additional funds that could

be invested with more risk. In this context, only a mainstay of an individual's investment portfolio that will be used for retirement years is taken into account.

For example, consider a younger worker who has a job with little opportunity to ramp up income in the face of investment losses. Because the worker may not be able

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to increase his human capital, there should be an acknowledgment that a larger amount of financial capital may need to be invested in safer vehicles than the older paradigms would suggest.

At the opposite end of the spectrum, an older person may have limited or zero human capital. This person has a need to invest in safe financial investments. Because consumption should be leveled out, this is the same process that should be taking place when individuals have limited human capital and must rely upon financial capital for their livelihood. This idea of smoothing consumption is paramount. To smooth consumption, an individual may need to use lower risk (and lower return) investments as well as insurance such as life insurance, medical insurance, long-term healthcare insurance, and disability income insurance.

A key implication of life cycle investing is that there are safe investments that are appropriate to use as the base layer of personal wealth. The factor of human capital enters into the use of investments during the accumulation phase of life.

Part of this factor of human capital is the resiliency of the capital; that is, the ability to earn more money when economic conditions have turned sour. As the life cycle theory of investing becomes more familiar, there is often an increased focus on safety first in investments, as well as an increased attention to coordinating investment policies with human capital.

Financial planners using this new concept will have to adopt different paradigms of risk management and investment strategies. An analysis of human capital should occupy a much more prominent place in the financial planner's repertoire. Financial planners must also be on the lookout for new products produced by the life insurance industry, and they must become accustomed to using different types of annuity products to achieve this smoothing out during the decumulation cycle. It will also be necessary to advise clients on how they can preserve and prolong their human capital so that their investment capital does not take a substantial hit during the withdrawal period. The continuing shift from defined benefit to defined contribution pension plans makes life cycle investment planning increasingly critical in financial planning. This need is made even more critical as a result of other sea changes in retirement planning, including increasing longevity of the retiree population, potential reductions in Social Security in later retirement for baby boomers, and the increasing cost for healthcare as boomers age.

### Providing Balance

From the authors' perspective as financial planners, the concepts that are set forth in life cycle investing are relevant to clients when developing investment strategies for both the accumulation and decumulation phases of investment management. Balancing people's human capital with their financial capital will provide significant benefits in both stages of life. □

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