

Life Cycle Funds: A “Stage in Life” Investment Alternative

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Abstract

Investors in today’s market have a relatively new mutual fund investment alternative to consider: Life Cycle Funds. The primary appeal of this type of investment is its “set it and forget it” approach to investing. Investors and employees with little time to oversee and manage their investment portfolios are drawn to this category of fund.

Demand for this relatively new type of fund, first introduced in the 1990s, is reflected in their rapid growth. Life-cycle fund assets grew 60% in 2005 from the prior year to \$70.1 billion (Laise, 2006). The number of offerings has increased significantly, so much so that Morningstar recently introduced three new categories of life-cycle funds. (Morningstar, 2005)

This research focuses on the relatively new life cycle funds and answers questions regarding their availability, expenses, turnover, risk and return. A comparison of these variables is made with the total universe of mutual funds. Investors are provided information to utilize in making a more informed investment decision.

Literature Review

According to the life-cycle of consumption and saving theories, the demand for different types of financial assets changes over a person’s life cycle. Individuals differ in their desire to save and hold financial assets, which can be dependent on socio-economic characteristics, labor income, wealth and net worth. (Tin, 1998; Tin, 2000)

Most approaches to portfolio management suggest beginning the investment process by defining investor’s goals and finding specific products to help achieve them. In the case of developing a portfolio for retirement, the planning time horizon should get shorter as age increases. (Bodie, 2003) In developing any portfolio, risk is another important variable for investors to consider. Risk attitude is related to where an investor is on the life cycle. (Malkiel, 1996) Individuals choose less risky portfolios as they near retirement because of their limited ability to recover investment losses. However, higher-risk securities can be appropriate for longer-term investors with a shift to more conservative investments near retirement. (Hickman, Hunter, Byrd, Beck and Terpening, 2001) Investors make their asset allocation decisions based on their time horizon and risk tolerance. (Schooley and Worden, 1999) However, stockholders are more risk-averse and generally do not invest their portfolios fully in stocks. (Gomes and Michaelides, 2005)

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There is ample evidence suggesting investors do not save or fully take advantage of their companies' 401(k) plans as a means to fund retirement. Among reasons commonly stated for employees not enrolling in company-sponsored plans are complexity and lack of knowledge of the investment process. Life-cycle funds were developed to greatly simplify the investment process to meet the growing demand of an aging populace.

Life-cycle funds are different than life-style funds. Life-cycle funds automatically change asset allocation blends as a pre-determined date, such as retirement, approaches. Although retirement is often stated as the reason for investing in this type of investment vehicle, funding a child's education, or other major purchase, are other typical reasons for using these date-defined funds. Life-style funds, on the other hand, are a subset of life-cycle funds. Life-style funds are usually more aggressive in investment selections, but maintain specific asset allocations, based on an investor's stated risk tolerance and performance objectives. (Ezrati, 2006; Quinn 2006)

There are basically two types of life-cycle funds. Target-risk funds are usually divided into aggressive, moderate, and conservative risk categories. Target-risk funds have pre-set asset allocations for each category and the investor moves money from one fund to another as a specific goal, such as retirement, approaches. Allocations are periodically rebalanced to meet the predetermined levels. Target-maturity funds, on the other hand, focus on a pre-defined retirement date and automatically, "behind the scenes," change asset allocations as the date approaches. (Benz, 2004; Scherreik, 2002; Wang, 2005; Woodward, 2006)

Life-cycle funds differ in management style. Some life-cycle funds are passively managed and track indexes, but most invest actively. (Investopedia, 2005; Morningstar, 2005) As of June 30, 2006, there are 630 life-cycle funds, approximately 420 of which are less than three years old. Even AARP has a family of these funds. (Powell, 2006) The Federal Government recently added them to its employee-retirement plans. (Kiviat, 2005)

Asset allocation or asset mix decisions are a major determinant of a portfolio's return. Many portfolio managers and investors argue it is the most important factor to consider in setting up and maintaining a portfolio. Asset allocations in life-cycle funds are traditionally in cash, stocks and bonds. In essence, a life-cycle fund is made up of other funds: a "fund of funds." As a consequence, investors may be charged fees for the life-cycle fund in which they invest as well as assessed additional costs for underlying funds.

The investment process for a target-maturity fund is straight forward. An investor using a life-cycle fund for retirement, for example, picks an estimated retirement date. The investor then sets aside, usually in a 401(k) or 403(b) plan, a certain dollar amount each pay period to put into a selected fund. The fund's managers take it from there, investing in cash, stocks and bonds, based upon the investor's selected retirement date. If the investor selects 2045 as the retirement date, for example, a large proportion of the portfolio's assets will initially be allocated to stocks, with lesser amounts allocated to bonds and cash. Portfolio managers change the allocation mix as the selected retirement date approaches, with a declining percentage invested in equities.

Professional management, diversification, higher returns, and attracting new or young investors to get started investing are often given as positive reasons for investing in life-cycle funds. (Lim, 2006) Life-cycle funds do, however, have some drawbacks.

Fund managers often assume the life-cycle fund portfolio is the investor's only investment. An investor with multiple goals may find investing in life-cycle funds is not the only way to meet objectives. (Browning, 2003) In addition, a too conservative an asset mix, large variances in fund asset allocations, substantial costs and fees, lack of long-term records, performance monitoring difficulties, differing risk tolerances, and inability to take advantage of tax-efficient investments can be major investor concerns. (Benz, 2004; Haynes, 2005; Kahn, 1998; Lim, 2006) Another problem is the "one-size-fits-all" approach, which may not fit a particular investor's situation. (Kiviat, 2005) These funds only consider anticipated retirement date, not investor's goals and objectives and degree of risk aversion. Individuality and unexpected changes that can happen throughout life are not considered with choosing a life-cycle fund. (Ezrati, 2006)

Longevity risk has grown to be a major concern. Investors' outliving their assets has become a major problem, as life spans have increased over the past several decades. (Burton, 2006) Investors should be aware being conservative with retirement assets can be the wrong strategy. (Middleton, 2005) As a result, many life-cycle funds have increased the amount of total assets invested in stocks at early stages of the life cycle and are reducing the allocation from equities into other assets more slowly over time. (Laise, 2006; Goldberg, 2006) Some funds now include REITs, TIPs, commodities and emerging-markets debt in their portfolios. (Young, 2006)

Investors should look for life cycle funds that hold high quality assets, have reasonable costs and a lot of diversification. Morningstar can help the potential investor make a decision. Fees can vary widely. (Powell, 2006)

How do life-cycle funds stack up with all mutual funds in the areas of expenses, turnover, risk and return? This research compares all mutual funds with life-cycle funds in an attempt to answer these questions.

Methodology

Data for this study was gathered from Morningstar and Yahoo! Finance. A total of 3,506 mutual funds contained usable three-year data, while 2,698 mutual funds had usable five-year data. These mutual funds with usable data composed the "all mutual funds" group. This "all mutual funds" group was statistically compared over similar time periods with mutual funds classified into the life-cycle group as shown in Table I. The "all mutual funds" group includes those classified as life cycle funds. Funds in both groups were categorized as: Conservative Allocation, Large Blend, Mid-Cap Growth, Moderate Allocation, Target-Date 2000-2014, Target-Date 2015-2029, and Target-Date 2030+. Average expense and turnover ratios were calculated for these categories as were return, risk and star ratings and percentile ranking. Mean standard deviation and beta risk measures were also tabulated. Jensen's "alpha," which provides the average return of a portfolio in comparison with CAPM expectations, was also calculated for the "all mutual funds" and life-cycle funds groups. (Bodie, 2005)

Findings

The number of life-cycle funds in each category is given in Table I. Because they are relatively new, the number of life cycle funds with ten and fifteen year data is limited. The five largest life-cycle funds by assets held are: Fidelity, Principal, Vanguard, Barclays, and T. Rowe Price.

Expense and turnover ratios for life-cycle funds and all mutual funds groups are shown in Table II. Life-cycle funds have, on average, statistically significant higher expense ratios in all categories. Turnover of the average life-cycle fund is much higher than for the all mutual funds group. Turnover ratios for the Mid-Cap Growth and Target-Date 2030+ categories, however, are less than for the average of the mutual fund group.

Morningstar Return, Risk and Star ratings are found in Table III. The average three, five, ten year Return and Star ratings are statistically significant and higher for life-cycle funds than for the all mutual funds group. The average risk rating for life-cycle funds, however, was lower when compared to all mutual funds in the database.

Percentile rank and plus-or-minus return for life-cycle funds in each category are shown in Table IV. Each fund has a percentile rank in its Morningstar category. Funds in the 1 to 49 percentile beat the average. The left-hand side of Table IV reflects the percentile rank by category for the time periods studied. Overall, life-cycle funds beat the average in the three, five and ten year time periods. The difference between a fund's return and average return of its category is shown in the right-hand side of Table IV. Average three, five and ten year returns for life-cycle funds were positive, indicating they beat the average mutual fund, but was negative for the fifteen year comparison. Fifteen year returns were below the average and had overall negative returns. Return category average and percentile rank in category differences were found to be statistically significant.

Three, five, and ten-year standard deviations and betas are given in Table V and Table VI, respectively. Average standard deviations for life-cycle funds in the three, five, and ten year periods are lower, but not statistically significant than for the all mutual fund group. Average betas for life-cycle funds are, however, slightly higher in the three and five-year time periods, but lower in the ten-year period than for all mutual funds and not statistically significant.

Jensen's Alpha calculations are shown in Table VII. On average, the two groups did not outperform S&P 500 benchmarks on risk-adjusted terms. Life-cycle funds, however, did better than the all mutual funds group in the three, five, and ten year periods, most notably in the large blend and mid-cap growth categories. Statistically significant differences were found to exist in the three and ten year comparisons.

Conclusion

Life-cycle funds have experienced rapid growth. These funds offer investors the opportunity to make investment decisions with a minimal amount of intervention. This research found, on average, expense and turnover ratios, return and star ratings and performance are higher for life-

cycle funds than their all mutual funds counterparts. Additionally, life-cycle funds generally have lower standard deviations, but slightly higher betas than the mutual fund composite. Life-cycle funds, on average, had higher risk-adjusted alpha returns.

The authors conclude life-cycle funds can be an attractive investment alternative, especially for investors with little time or investment expertise.

Table I
Number of Available Life-Cycle Funds as of June 30, 2006

Morningstar Category	with 3-Year Data	with 5-Year Data	with 10-Year Data	with 15-Year Data
Conservative Allocation	24	20	12	
Large Blend	23	15	6	
Mid-Cap Growth	12	12		
Moderate Allocation	16	12	4	
Target-Date 2000-2014	44	34	9	2
Target-Date 2015-2029	19	14	2	
Target-Date 2030+	44	34	4	
Total Number	182	141	37	2

Table II
Expense Ratio and Annual Turnover: Life-Cycle Funds vs. Average of All Mutual Funds

Morningstar Category	Expense Ratio (%)		Annual Turnover (%)	
	LCFs	Category Average	LCFs	Category Average
Conservative Allocation	1.26	1.18	150.71	57.31
Large Blend	1.65	1.19	100.96	71.12
Mid-Cap Growth	2.68	1.58	4.00	111.94
Moderate Allocation	1.51	1.19	158.63	73.22
Target-Date 2000-2014	1.18	0.73	25.70	22.91
Target-Date 2015-2029	1.25	0.65	16.63	12.78
Target-Date 2030+	1.26	0.66	17.34	17.70
Average	1.54	1.03	67.71	52.43
T-test (probability)	0.002419494***		0.28416538	

*** Significant at the 0.01 level.

Table III
Morningstar Return, Risk, and Star Ratings: Life-Cycle Funds vs. Category Average (3.00)

Morningstar Category	Return Rating			Risk Rating			Star Rating		
	3- Year	5- Year	10- Year	3- Year	5- Year	10- Year	3- Year	5- Year	10- Year
Conservative Allocation	3.38	3.05	3.25	3.33	3.35	3.00	3.38	2.85	3.42
Large Blend	3.74	3.87	3.33	3.00	2.40	1.83	3.74	3.93	3.83
Mid-Cap Growth	3.17	3.00		2.00	2.50		3.33	3.00	
Moderate Allocation	3.38	3.33	3.25	3.25	3.42	3.00	3.38	3.25	3.25
Target-Date 2000-2014	3.39	3.62	3.00	2.98	3.24	3.00	3.39	3.68	3.00
Target-Date 2015-2029	2.95	3.00		2.74	2.36		2.95	3.00	
Target-Date 2030+	2.86	3.32		2.75	2.59		2.86	3.32	
Average	3.27	3.31	3.21	2.86	2.84	2.71	3.29	3.29	3.38
T-test (probability)	0.028**	0.024**	0.031**	0.224	0.200	0.196	0.021**	0.049**	0.060*

** Significant at the 0.05 level.

* Significant at the 0.10 level.

Table IV
Percentile Rank in Category and Return +/- Category Average

Morningstar Category	Percentile Rank in Category				Return +/- Category Average			
	3- Year	5- Year	10- Year	15- Year	3- Year	5- Year	10- Year	15- Year
Conservative Allocation	35.71	45.60	34.33		1.20	0.15	0.93	
Large Blend	24.57	19.80	41.83		2.08	2.15	0.75	
Mid-Cap Growth	39.08	42.08			1.04	0.61		
Moderate Allocation	31.38	34.58	34.75		1.05	0.83	0.93	
Target-Date 2000-2014	49.00	49.18	50.11	50.50	0.17	0.08	0.09	-0.26
Target-Date 2015-2029	50.26	50.07	50.50		0.18	0.12	0.16	
Target-Date 2030+	50.02	50.50	50.50		0.12	0.10	0.15	
Average	40.00	41.69	43.67	50.50	0.83	0.58	0.50	-0.26
T-test (probability)	0.020**	0.048**	0.052*		0.011**	0.045**	0.015**	

** Significant at the 0.05 level.

* Significant at the 0.10 level.

Table V
Standard Deviation (%): Life-Cycle Funds vs. Average of All Mutual Funds

Morningstar Category	3-Year		5-Year		10-Year	
	LCFs	Category Average	LCFs	Category Average	LCFs	Category Average
Conservative Allocation	4.13	3.85	5.95	5.41	6.54	6.87
Large Blend	8.07	8.32	12.69	13.56	13.21	15.57
Mid-Cap Growth	11.60	13.07	16.40	17.88		
Moderate Allocation	5.95	5.88	9.24	8.84	9.70	10.36
Target-Date 2000-2014	4.17	4.11	5.25	5.22	6.69	6.53
Target-Date 2015-2029	5.77	5.72	8.35	8.40	10.42	10.41
Target-Date 2030+	7.23	7.22	10.78	10.84	13.73	13.74
Average	6.70	6.88	9.81	10.02	10.05	10.58
T-test (probability)	0.226953785		0.231180548		0.112849568	

Table VI
Beta Coefficients: Life-Cycle Funds vs. Average of All Mutual Funds

Morningstar Category	3-Year		5-Year		10-Year	
	LCFs	Category Average	LCFs	Category Average	LCFs	Category Average
Conservative Allocation	0.60	0.50	0.64	0.56	0.59	0.58
Large Blend	0.99	1.01	0.90	0.96	0.78	0.93
Mid-Cap Growth	1.35	1.40	1.10	1.12		
Moderate Allocation	0.91	0.85	1.04	0.95	0.92	0.92
Target-Date 2000-2014	0.57	0.57	0.53	0.52	0.56	0.56
Target-Date 2015-2029	0.89	0.88	0.94	0.94	1.02	1.01
Target-Date 2030+	1.10	1.10	1.21	1.21	1.34	1.34
Average	0.92	0.90	0.91	0.89	0.87	0.89
T-test (probability)	0.240348827		0.253180961		0.219198138	

Table VII
Alphas (%): Life-Cycle Funds vs. Average of All Mutual Funds

Morningstar Category	3-Year		5-Year		10-Year	
	LCFs	Category Average	LCFs	Category Average	LCFs	Category Average
Conservative Allocation	-2.00	-2.30	-1.55	-1.25	0.29	-0.44
Large Blend	1.77	-0.28	1.92	-0.14	0.73	-0.49
Mid-Cap Growth	1.39	0.24	1.66	1.24		
Moderate Allocation	-1.73	-2.08	-3.09	-3.44	-0.05	-0.82
Target-Date 2000-2014	-1.78	-1.88	-0.92	-0.95	-0.36	-0.39
Target-Date 2015-2029	-1.49	-1.58	-2.48	-2.62	-1.20	-1.32
Target-Date 2030+	-1.44	-1.53	-3.73	-3.85	-1.80	-1.93
Average	-0.75	-1.34	-1.17	-1.57	-0.40	-0.90
T-test (probability)	0.040446089**		0.107048969		0.025391819**	

** Significant at the 0.05 level.

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