

Retirement Report

LITTLETON PUBLIC SCHOOLS
403(B) AND 457 RETIREMENT PLANS

Protect the Nest

A four-point plan for making your savings last

Like most investors, you may be concerned about outliving your money. To sustain your savings during retirement, consider strategies that may help address the following four money-diminishing factors:

1 Longer life expectancies

In May 2016, scientists attended a Harvard conference to discuss a groundbreaking new idea — fabricating a human genome from scratch. Using a gene-editing technology called CRISPR¹, scientists believe they may be able to eliminate inherited diseases and even slow the aging process. If you are under 30, you may be part of the first generation in history that could be promised immortality.

While this technology may seem like Hollywood science fiction, it points out a very real fact: We are likely to live longer, and may need our money to last longer than we ever thought. This is particularly true for women, who tend to earn less than men and are more likely to struggle financially after retirement.²

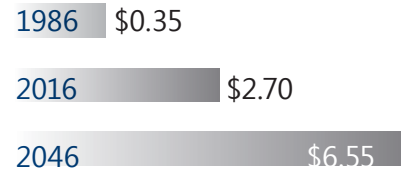
Investing for long-term growth remains imperative, which is why stock funds — whose returns historically have outpaced those of all major asset classes — deserve a place in most portfolios.

2 Inflation

Inflation is the rate at which the buying power of a dollar erodes each year. To maintain a reasonable standard of living over time, your investments may need to match or outpace inflation. That’s another reason to buy stocks. They historically have produced the highest returns (but also the most risk) of all major asset classes.³

Inflation’s Impact

The cost of a cup of coffee



Sources: 1986 prices are based on Kmotion Research. 2016 prices are based on general averages. Projections for 2046 prices assume a 3% annual inflation rate.



3 Market returns

Over time, investing generates stable rates of return: Common stocks have returned about 11% a year, on average with dividends reinvested, since 1926; bonds have earned about 5.5%.⁴ But both stocks and bonds have had many years producing lower, even negative, returns. Within shorter time frames, however, returns can be choppy, and you may need to build some uncertainty into your return expectations.

The Rule of 72

To determine how many years it will take to double your money, choose a rate of return and divide it into 72.⁵

Rate of Return	Rule of 72 (Years)
6%	12 Years
8%	9 Years
10%	7.2 Years
12%	6 Years

4 Health care costs

Likely your biggest expense as you age, health care is estimated to cost a healthy 65-year-old couple \$266,600 in Medicare premiums alone, according to one study.⁶ This doesn’t include out-of-pocket expenses or long-term care, dental or vision insurance.

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Protecting the Nest

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Earmarking a large chunk of your nest egg for health care expenses may make sense.

A savings plan that takes these four factors into account can give you greater confidence that your savings can last well into your retirement years.

Take a Keen Interest When Interest Rates Rise

Interest rates affect homeowners and credit card holders, but they also can have an indirect impact on the stock market.

Interest rates generally refer to the Federal Reserve's funds rate — the cost that banks are charged to borrow money from other U.S. banks. The Fed controls interest rates mostly as a way to ensure that inflation does not get too high (inflation has an eroding effect on your purchasing power). Too much inflation means rising prices and consumers having less buying power, which economists say can lead to business stagnation and higher unemployment.

When the Fed increases interest rates, it makes it more expensive to borrow money, which can have a moderating effect on prices. Interest rate hikes also have direct and indirect effects on most financial products, from credit cards and mortgages to stocks and bonds.

Because higher rates make it more expensive for consumers to borrow, consumer spending tends to slow. As a result, businesses may experience lower revenues and profits, and may decide to borrow less money to plow back into their companies.

Rising rates can indirectly harm the prices of certain stocks, which generally are valued based on future earnings. If enough businesses cut back on business

spending due to decreased revenues, entire stock market indexes like the Dow Jones Industrial Average or S&P 500 can go down. In addition, since stocks are considered to be riskier than bonds, some investors will see rising interest rates as a signal to sell stocks and buy government securities such as Treasury bonds, which may offer a more stable rate of current return. That, too, can cause stock prices to go lower.

In fact, since 1913, U.S. stocks have gained an annual average of 9.3% when interest rates fell, but only 2.3% in periods when rates rose, according to a recent finance study cited in *The Wall Street Journal*. Bonds, by contrast, returned an average of 3.6% annually in periods when rates fell, but only 0.3% when rates rose.⁷

Keep in mind that all of these factors are interrelated, and that one can never say with certainty that an interest rate hike by the Fed always leads to lower stock prices. Keeping a portfolio that's well-diversified among stocks, bonds and cash could be an effective way to offset the market forces outside of your control, including interest-rate movements and stock-market declines.

1 Clustered regularly interspaced short palindromic repeats. Source: "Will We Be the Last Generation to Die?" *Boston Globe*, July 11, 2016.

2 "Shortchanged in Retirement: Continuing Challenges to Women's Financial Future," National Institute on Retirement Security, March 2016.

3 Past performance is no guarantee of future results. All investing involves risk, including loss of principal.

4 <http://www.bankrate.com/finance/retirement/stocks-bonds-and-mutual-funds-1.aspx>.

5 This hypothetical illustration is intended to illustrate the concept of investment compounding and is not predictive of any investment return.

6 Health View Services, 2015 Retirement Health Care Costs Data Report, December 2015.

7 Jason Zweig, "Sorry, You're Just Going to Have to Save More Money," *The Wall Street Journal*, July 13, 2016. Returns include the effects of inflation. Past performance does not predict future results; <http://blogs.wsj.com/moneybeat/2016/07/13/sorry-youre-just-going-to-have-to-save-more-money%E2%80%8B/>.

Whom do I call for help?

Contact TIAA-CREF for the following:

- > Balances
- > Investment changes
- > Change personal info

800.842.2009

www.tiaa-cref.org

The Plan's Investment Consultant

Innovest Portfolio Solutions

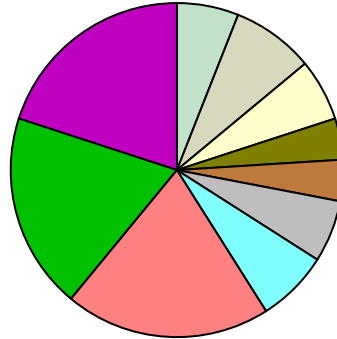
4643 S. Ulster St., Suite 1040
Denver, CO 80237

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Who typically uses this portfolio?

Current Age: over 60
Risk Level: Low
Expected Return: Low
Time Horizon:
Years to Age 65: under 5
Years to Age 85: under 25
Expense Ratio (%): 0.28

Portfolio Allocation (%)



Dodge & Cox Stock (DODGX)	6.0
Vanguard 500 Index;Adm (VFIAX)	8.0
Harbor:Cap Apprec;Inst (HACAX)	6.0
Vanguard Md-Cp Idx;Adm (VIMAX)	4.0
Vanguard Sm-Cp Idx;Adm (VSMAX)	4.0
Am Beacon:Intl Eq;Inst (AAIEX)	6.0
American Funds EuPc;R-6 (RERGX)	7.0
Met West:Total Return;I (MWTIX)	20.0
Vanguard Tot Bd;Adm (VBTLX)	19.0
TIAA Traditional	20.0

Past Performance (%)*

	Last Quarter	YTD	1 Year	3 Years	5 Years	10 Years
Littleton Public School Conservative	-0.09	5.21	5.21	3.98	7.15	N/A

Understanding Your Professionally-Managed Portfolios

Who typically uses this portfolio?

Current Age: The age (today) of an average investor with time horizon, risk level, and return expectations of the Conservative Portfolio.

Time Horizon: Indicates the number of years (time horizon) to the average retirement age of 65, when the investor will begin spending the money in their account, and the number of years to assumed life expectancy of age 85.

Risk Level: The amount of expected risk in the Conservative Portfolio. Risk is measured by the potential loss over a 12-month period that an investor might expect in the Conservative Portfolio, and is calculated via a statistical process consistent with 95% probability.

Low: -8% to -14%

Expected Return: The level of expected investment return from the Conservative Portfolio. The range of returns shown below indicates the potential gain that an investor might expect each year, on average, over a 5-year period. This is also referred to as the "mean" return, and is calculated using a statistical process to determine a range of probabilities.

Low: 4% to 6%

Past Performance

Investment performance results shown above represent past performance and are not indicative of future results. Please read the information contained in the applicable fund prospectuses carefully before investing money.

How is the portfolio diversified?

The pie chart and accompanying data shown for each portfolio illustrates the percentage allocated to each fund.

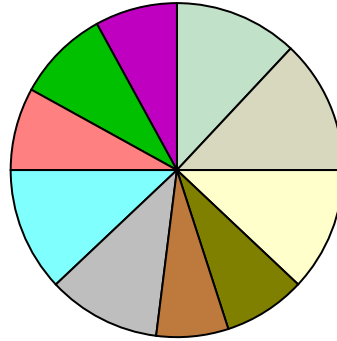
*Innovest relies on 3rd party data for these returns.

**Returns using TIAA Traditional Annuity - GRA contract

Who typically uses this portfolio?

Current Age: 40 - 60
Risk Level: Moderate
Expected Return: Moderate
Time Horizon:
Years to Age 65: 5 - 25
Years to Age 85: 25 - 45
Expense Ratio (%): 0.34

Portfolio Allocation (%)



Dodge & Cox Stock (DODGX)	12.0
Vanguard 500 Index;Adm (VFIAX)	13.0
Harbor:Cap Apprec;Inst (HACAX)	12.0
Vanguard Md-Cp Idx;Adm (VIMAX)	8.0
Vanguard Sm-Cp Idx;Adm (VSMAX)	7.0
Am Beacon:Intl Eq;Inst (AAIEX)	11.0
American Funds EuPc;R-6 (RERGX)	12.0
Met West:Total Return;I (MWTIX)	8.0
Vanguard Tot Bd;Adm (VBTLX)	9.0
TIAA Traditional	8.0

Past Performance (%)*

	Last Quarter	YTD	1 Year	3 Years	5 Years	10 Years
Littleton Public School Moderate	1.17	6.99	6.99	4.56	10.33	N/A

Understanding Your Professionally-Managed Portfolios

Who typically uses this portfolio?

Current Age: : The age (today) of an average investor with time horizon, risk level, and return expectation of the Moderate Portfolio.

Time Horizon: Indicates the number of years (time horizon) to the average retirement age of 65, when the investor will begin spending the money in their account, and the number of years to assumed life expectancy of age 85.

Risk Level: The amount of expected risk in the Moderate Portfolio. Risk is measured by the potential loss over a 12-month period that an investor might expect in the Moderate Portfolio, and is calculated via a statistical process consistent with 95% probability.

Moderate: -13% to -19%

Expected Return: The level of expected investment return from the Moderate Portfolio. The range of returns shown below indicates the potential gain that an investor might expect each year, on average, over a 5-year period. This is also referred to as the "mean" return, and is calculated using a statistical process to determine a range of probabilities.

Moderate: 5% to 7%

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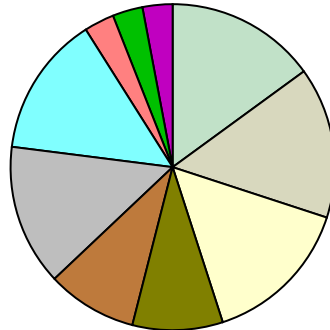
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**Returns using TIAA Traditional Annuity - GRA contract

Who typically uses this portfolio?

Current Age: 30 - 50
Risk Level: High
Expected Return: High
Time Horizon:
Years to Age 65: 15 - 35
Years to Age 85: 35 - 55
Expense Ratio (%): 0.39

Portfolio Allocation (%)



Dodge & Cox Stock (DODGX)	15.0
Vanguard 500 Index;Adm (VFIAX)	15.0
Harbor:Cap Apprec;Inst (HACAX)	15.0
Vanguard Md-Cp Idx;Adm (VIMAX)	9.0
Vanguard Sm-Cp Idx;Adm (VSMAX)	9.0
Am Beacon:Intl Eq;Inst (AAIEX)	14.0
American Funds EuPc;R-6 (RERGX)	14.0
Met West:Total Return;I (MWTIX)	3.0
Vanguard Tot Bd;Adm (VBTLX)	3.0
TIAA Traditional	3.0

Past Performance (%)*

	Last Quarter	YTD	1 Year	3 Years	5 Years	10 Years
Littleton Public School Aggressive	1.83	7.82	7.82	4.77	11.81	N/A

Understanding Your Professionally-Managed Portfolios

Who typically uses this portfolio?

Current Age: : The age (today) of an average investor with time horizon, risk level, and return expectation of the Aggressive Portfolio.

Time Horizon: Indicates the number of years (time horizon) to the average retirement age of 65, when the investor will begin spending the money in their account, and the number of years to assumed life expectancy of age 85.

Risk Level: The amount of expected risk in the Aggressive Portfolio. Risk is measured by the potential loss over a 12-month period that an investor might expect in the Aggressive Portfolio, and is calculated via a statistical process consistent with 95% probability.

High: -17% to -23%

Expected Return: The level of expected investment return from the Aggressive Portfolio. The range of returns shown below indicates the potential gain that an investor might expect each year, on average, over a 5-year period. This is also referred to as the "mean" return, and is calculated using a statistical process to determine a range of probabilities.

High: 6% to 8%

Past Performance

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How is the portfolio diversified?

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 **Returns using TIAA Traditional Annuity - GRA contract