Help sustain your assets:
BE BULLISH IN RETIREMENT

A careful evaluation of your asset allocation and initial withdrawal amount in retirement is vital. The following tables show how stocks—in varying proportions—coupled with a realistic initial withdrawal amount could increase the probability of comfortably funding a 25-, 30-, or even 35-year retirement.

For example, the middle table suggests that there is an 80% chance that a mix of 40% stocks and 60% bonds would sustain a 4% initial withdrawal amount (increased 3% annually for inflation) throughout a 30-year retirement.

25-YEAR RETIREMENT

Initial Withdrawal Amount	Stock/Bond* Mix				
	100/0	80/20	60/40	40/60	20/80
3%	95%	97%	99%	100%	100%
4	85	87	90	92	93
5	70	71	71	68	58
6	54	52	46	36	18
7	39	34	26	13	3
8	27	21	13	4	0

30-YEAR RETIREMENT

Initial Withdrawal Amount	Stock/Bond* Mix				
	100/0	80/20	60/40	40/60	20/80
3%	90%	93%	96%	97%	98%
4	77	79	80	80	74
5	60	60	56	46	28
6	44	40	32	19	5
7	31	25	16	6	0
8	20	14	7	1	0

35-YEAR RETIREMENT

Initial Withdrawal Amount	Stock/Bond* Mix				
	100/0	80/20	60/40	40/60	20/80
3%	86%	89%	91%	93%	93%
4	70	71	70	65	52
5	53	51	44	32	13
6	38	33	23	11	1
7	26	19	11	3	0
8	16	11	4	0	0

Key:

More Likely

Less Likely**

Armed with the above, investors can customize an asset mix and initial withdrawal amount to coincide with their specific requirements.

IMPORTANT: The information regarding the likelihood of various investment outcomes is hypothetical in nature, does not reflect actual investment results, and is not a guarantee of future results. The simulations are based on a number of assumptions. There can be no assurance that the results shown will be achieved or sustained. The charts present only a range of possible outcomes. Results may vary, and such results may be better or worse than the simulated scenarios. Clients should be aware that the potential for loss (or gain) may be greater than demonstrated in the simulations.

*The following allocations include short-term bonds: 60/40 is 60% stocks, 30% bonds, and 10% short-term bonds; 40/60 is 40% stocks, 40% bonds, and 20% short-term bonds; and 20/80 is 20% stocks, 50% bonds, and 30% short-term bonds.

**The likelihood of having at least $1 remaining in the portfolio at the end of the retirement period.

For more information, please call your investment professional or T. Rowe Price at 1-877-804-2315.

Monte Carlo Simulation

Monte Carlo simulations model future uncertainty. In contrast to tools generating average outcomes, Monte Carlo analyses produce outcome ranges based on probability, thus incorporating future uncertainty.

MATERIAL ASSUMPTIONS INCLUDE:

- Underlying long-term expected annual returns for the asset classes are not directly based on historical returns. Rather, they represent assumptions that take into account, among other things, historical returns. They also include our estimates for reinvested dividends and capital gains.

- These assumptions, as well as an assumed degree of fluctuation of returns around these long-term rates, are used to generate random monthly returns for each asset class over specified time periods.

- The monthly returns are then used to generate thousands of scenarios, representing a spectrum of possible return outcomes for the modeled asset classes. Success rates are based on these scenarios.

MATERIAL LIMITATIONS INCLUDE:

- The analysis relies on return assumptions, combined with a return model that generates a wide range of possible return scenarios from these assumptions. Despite our best efforts, there is no certainty that the assumptions for the model will accurately estimate asset class return rates going forward. As a consequence, the results of the analysis should be viewed as approximations, and users should allow a margin of error and not place too much reliance on the apparent precision of the results.

- Extreme market movements may occur more often than in the model.

- Some asset classes have relatively short histories. Actual long-term results for each asset class may differ from our assumptions—with those for classes with limited histories potentially diverging more.

- Market crises can cause asset classes to perform similarly, lowering the accuracy of our projected return assumptions and diminishing the benefits of diversification (that is, using many different asset classes) in ways not captured by the analysis. As a result, returns actually experienced by the investor may be more volatile than projected in our analysis.

- The model does not take into consideration short-term correlations among asset class returns ("correlation" is a measure of the degree in which returns are related to or dependent upon each other). It does not reflect the average duration of "bull" and "bear" markets, which can be longer than those modeled.

- Inflation is assumed to be constant, so variations are not reflected in our calculations.

- The analysis does not use all asset classes. Other asset classes may provide different returns or outcomes than those used.

- Taxes are not taken into account, nor are early withdrawal penalties.

- The analysis models asset classes, not investment products. As a result, the actual experience of an investor in a given investment product (e.g., a mutual fund) may differ from the range generated by the simulation, even if the broad asset allocation of the investment product is similar to the one being modeled. Possible reasons for divergence include, but are not limited to, active management by the manager of the investment product or the costs, fees, and other expenses associated with the investment product. Active management for any particular investment product—the selection of a portfolio of individual securities that differs from the broad asset classes modeled in the analysis—can lead to the investment product having higher or lower returns than the range in this analysis.

MODEL PORTFOLIO CONSTRUCTION

Five model investment portfolios were designed by our investment professionals according to the principles of Modern Portfolio Theory, which is used to achieve effective diversification among different asset classes. An effectively diversified portfolio theoretically consists of all investable asset classes, including equities, bonds, real estate, foreign investments, commodities, precious metals, currencies, and others. Since it is unlikely that investors will own all of these assets, we selected the ones we believed to be the most appropriate for long-term investors. The asset classes used for the model portfolios are stocks, bonds, and short-term bonds. We did not consider real estate because of its illiquidity and the significant exposure many investors already have through homeownership. We believe the fixed income asset class we chose fairly represents the broad, liquid, domestic capital markets. We selected short-term, investment-grade bonds to provide stability and eliminated any explicit allocation to cash because we believe that the investor is best positioned to determine his/her own allocation to cash based on his/her near-term needs. The portfolios were constructed based on our analysis of the complementary behavior of asset classes over long periods of time, which enables us to identify investment mixes that offer greater efficiency through low correlation.

MODELING ASSUMPTIONS

- The primary asset classes used for this analysis are stocks, bonds, and short-term bonds. An effectively diversified portfolio theoretically involves all investable asset classes including stocks, bonds, real estate, foreign investments, commodities, precious metals, currencies, and others. Since it is unlikely that investors will own all of these assets, we selected the ones we believed to be the most appropriate for long-term investors.

- T. Rowe Price has analyzed a variety of retirement savings strategies using computer simulations to determine the likelihood of "success" (having at least one dollar remaining in the portfolio at the end of the retirement period) of each strategy, shown as a percentage in each grid. The initial withdrawal amount is the percentage of the initial value of the investments withdrawn in the first year where the entire amount is withdrawn on the first day of the year; in each subsequent year, the amount withdrawn is adjusted to reflect a 3% annual rate of inflation. The simulation success rates are based on simulating 10,000 possible future market scenarios and various retirement income strategies.

- Results of the analysis are driven primarily by the assumed long-term, compound rates of return of each asset class in the scenarios. Our corresponding assumptions, all presented in excess of 3% inflation, are as follows: for stocks, 4.90%; for bonds, 2.23%; and for short-term bonds, 1.38%.

- Investment expenses in the form of an expense ratio are subtracted from the return assumption as follows: for stocks, 0.70%; for bonds, 0.60%; and for short-term bonds, 0.55%. These expenses represent what we believe to be a reasonable approximation of investing in these asset classes through a professionally managed mutual fund or other pooled investment product.

The results are not predictions, but they should be viewed as reasonable estimates.

Proprietary Research ▪ Attention to Risk ▪ Style Consistency ▪ Experienced Investment Team

T. ROWE PRICE INVESTMENTS SERVICES, INC.

INVEST WITH CONFIDENCE®

C150SS6O4
2015-US-13025

E00-207
8/15