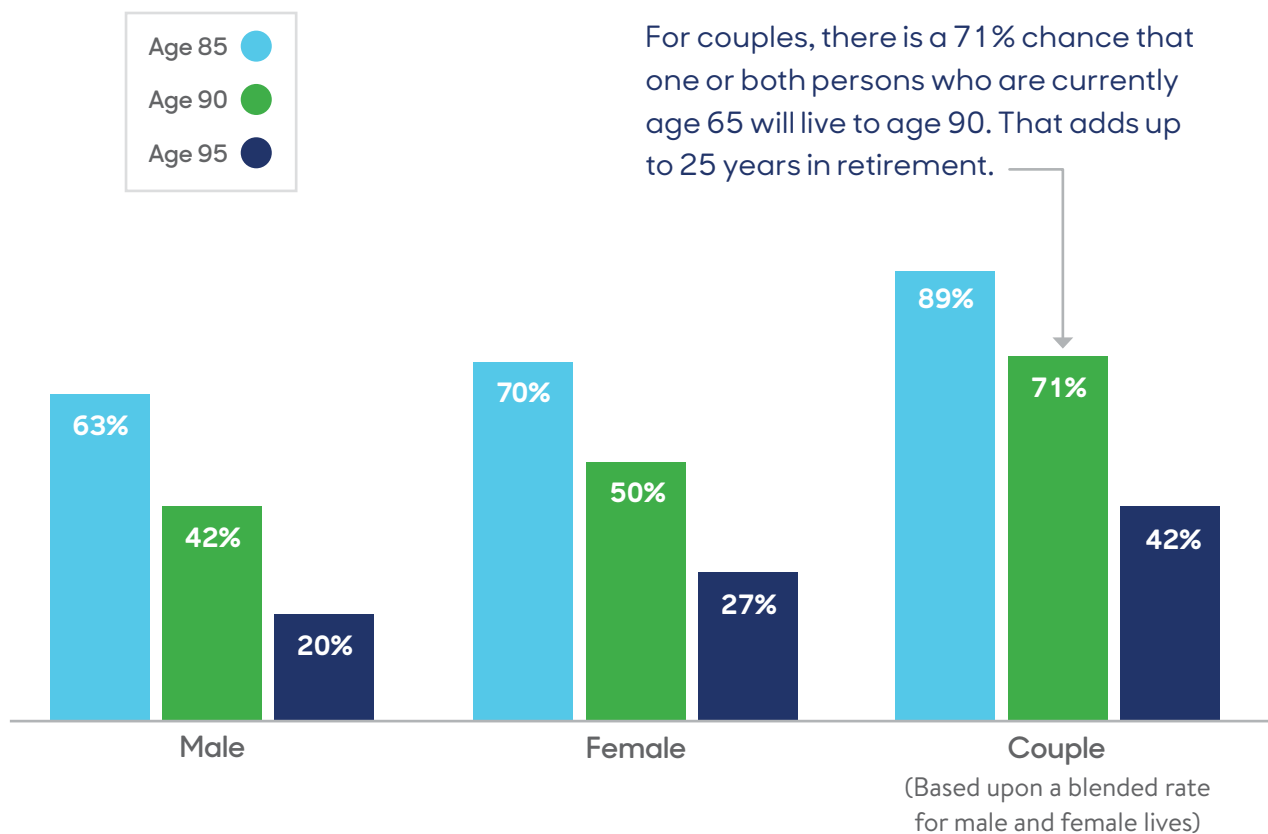


PREPARE FOR LONGEVITY:

# What's the likelihood of living longer?

We can't predict the future, but we can plan for it. Advances in medicine and technology are allowing people to live longer – and that can translate into extended retirement and a bigger strain on savings. Most of us would choose to live a longer and healthier life, even if it increased the risk of outliving our savings.

## PROBABILITY OF 65-YEAR OLDS LIVING TO CERTAIN AGES<sup>1</sup>



<sup>1</sup> Society of Actuaries 2012 IAM Period Mortality Table; Mortality Improvement Scale MI-2022V Massachusetts Mutual Life Insurance Company.

# Will your income last as long as you do?

Imagine you plan on a 30-year retirement, use a 60/40 stock/bond allocation, and withdraw 5% of the starting balance in the first year, increasing that initial amount by the rate of inflation each year. Historically, your withdrawal strategy would have succeeded 73% of the time. Put differently, would you be comfortable with a strategy that has had a 27% chance of not lasting as long as your retirement? **If not, contact your financial professional today to discuss your options.**

## PROBABILITY OF SUCCESS

	Annual Withdrawal Rate (%)	Stock/Bond Allocation				
		100/0	80/20	60/40	40/60	20/80
20-YEAR RETIREMENT	3	98%	99%	100%	100%	100%
	4	94%	97%	98%	99%	100%
	5	86%	89%	92%	94%	92%
	6	77%	79%	79%	77%	67%
	7	64%	64%	60%	51%	32%
	8	53%	48%	40%	26%	9%
30-YEAR RETIREMENT	3	94%	96%	98%	99%	99%
	4	84%	88%	89%	89%	82%
	5	73%	74%	73%	65%	45%
	6	60%	58%	51%	37%	15%
	7	47%	42%	30%	15%	3%
	8	35%	27%	16%	5%	0%
40-YEAR RETIREMENT	3	90%	92%	94%	95%	91%
	4	78%	81%	79%	73%	55%
	5	65%	65%	58%	44%	19%
	6	51%	47%	36%	19%	4%
	7	39%	33%	19%	7%	1%
	8	28%	20%	9%	2%	0%

**DATA & METHODOLOGY:** The tables demonstrate how the initial rate of withdrawal and various portfolio allocations can affect the chance of meeting income needs over a 20, 30, or 40-year retirement. Tables assume that stock/bond allocation remains the same over the entire retirement period and that the portfolio is rebalanced at the end of each year. It is assumed that a person withdraws an inflation-adjusted percentage of the initial portfolio balance each year, beginning in year one. Index returns are simulated based on historical results from 1/1/1926 through 12/31/2019 and rebalanced annually. Stocks are represented by the Duff & Phelps S&P 500 Large Company Stock Index, and bonds are represented by a 50/50 blend of the Duff & Phelps S&P 500 Long Term Corporate Bond Index and the Duff & Phelps S&P 500 Intermediate-Term Government Bond Index. Inflation is based on the Consumer Price Index, and hypothetical investment expenses of 1% are deducted from simulated returns to reflect what an investor may pay as a fund expense ratio or account management fee. Probabilities in the tables represent the outcome of randomized 10,000 simulations based on historical means and standard deviations of the indices.

**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. These charts present only a range of potential outcomes. Actual results may vary, and over time such results may be better or worse than the simulated scenarios.

The information provided is not written or intended as specific tax or legal advice. MassMutual®, its subsidiaries, employees, and representatives are not authorized to give tax or legal advice. Individuals are encouraged to seek advice from their own tax or legal counsel.

