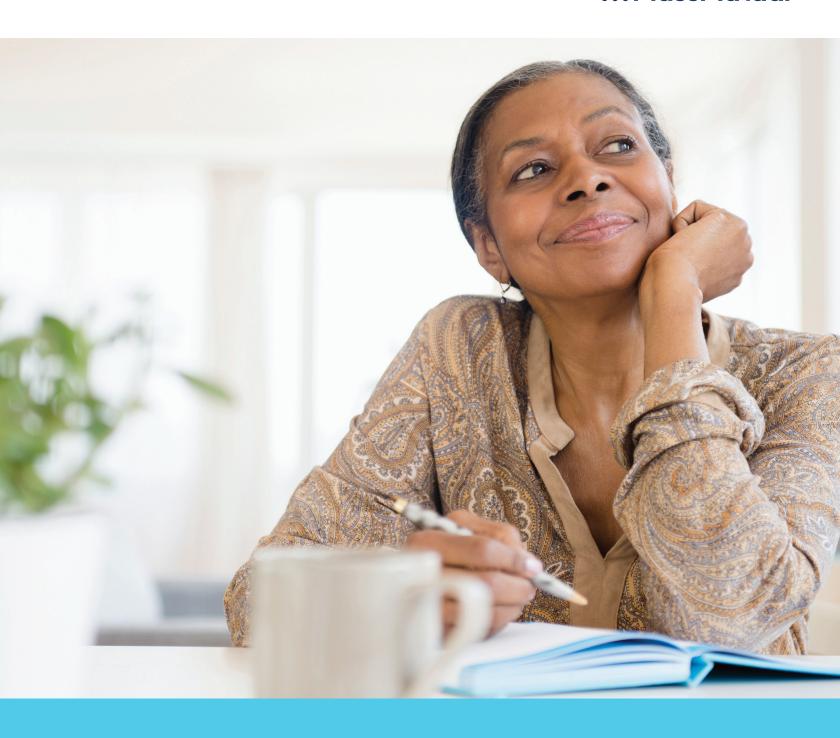
... MassMutual



Retirement Planning Workbook

TAKE CONTROL OF YOUR RETIREMENT

1	Retirement readiness
7	Asset allocation
11	Consolidation
12	Distributions
13	Tools and information
14	Retirement checklist



PLAN



15

SAVE



Retirement references

CONSOLIDATE



ALLOCATE



INFO

All examples in this workbook are hypothetical for illustrative purposes only. Individual experience will likely vary.

Retirement readiness

If you have yet to start seriously thinking about retirement, you are not alone. Most working Americans have not determined how much money they'll need for retirement. Considering you might have 15, 25, or more years in retirement, it's more important than ever to take control of your retirement finances. MassMutual can help by providing the resources you need. Choose the process you prefer:

- worksheets in this workbook or
- online tools and education available on your retirement plan website:
 www.massmutual.com/retirementaccess

This booklet outlines several considerations over the next few pages, then leads you to tables that can help you determine your approximate retirement savings goal.

Taking control starts now!

Important considerations to when determining how much you'll need:

- A. Your retirement lifestyle
- B. Life expectancy
- C. Inflation
- D. Working during retirement

- E. Other retirement income
- F. Medical/health issues
- G. Your retirement budget



Retirement readiness

A. Your retirement lifestyle

The lifestyle you choose for your retirement will affect the amount of money you'll need annually. The checklist and references included in this workbook provide ideas for setting a retirement budget. Let's start by identifying any planned life changes. What leisure activities or other lifestyle choices do you plan to pursue that might have a significant impact on your retirement budget?

1	4
2	5
3	6

B. People are living longer

According to the Social Security
Administration (June 2017), a man reaching age 65 today can expect to live, on average, until 84.3. A woman turning age 65 today can expect to live, on average, until age 86.6.
And those are just averages. About one out of every four 65-year-olds today will live past age 90, and one out of 10 will live past age 95. Depending on when you retire, you might live 20 or more years in retirement. You'll need enough retirement savings to last.

Indicate here your estimated life expectancy: Me: ______years My Spouse/Partner: _____years

C. Inflation

Inflation will affect your standard of living. Below is an example of how inflation at 3% per year can impact income after 20 years.

Income at retirement:	\$60,000 per year					
Equivalent income neede after 20 years of 3% inflation:	\$108,367 per year					
Your expected income at retirement (include spouse/partner if applicable):						
\$per year Consider how inflation m this during your retireme	•					
(Assumptions include retire hypothetical example, actua will differ.)						

D. Working during retirement

According to the 2017 Retirement Confidence Survey by the Employee Benefit Research Institute, 79% of workers say they plan to work after they retire. There are many reasons that retirees choose to work: needing the income, staying mentally and physically active, maintaining a connection with others, and receiving health insurance benefits.

Do you plan to work in retirement?	
Me:yesno	
My Spouse/Partner:yesno	
Total estimated annual income from worl	<
¢	

E. Retirement income sources

Retirement income sources may include Social Security, a defined benefit plan (or "pension"), other defined contribution plans, personal savings, and earned income (see Section D).

Fill out the table below to explore your expected sources of income in retirement.

When determining your retirement savings goal, it is important to understand your

potential Social Security benefit. This information may also help you decide when to retire because your retirement age will impact your Social Security payout.

Obtain an estimate online at www.ssa.gov, or call 1-800-772-1213.

		SPOUSE/	EXPECTED AMOUNTS			
SOURCE	ME	PARTNER	PER MONTH		PER YEAR	
Social Security	0	0	\$	x12=	\$	
Defined Benefit ("Pension")	0	0	\$	x12=	\$	
Personal Savings/Investments	0	0	\$	x12=	\$	
Earned Income	0	0	\$	x12=	\$	
Other:	0	0	\$	x12=	\$	
Current value of defined contribution plans*	0	0	\$	x12=	\$	
Total Estimated Income	0	0	\$	x12=	\$	

RETIREMENT AGE FOR SOCIAL SECURITY BENEFITS**					
Year of Birth	Full Retirement Age	Year of Birth	Full Retirement Age		
1937 or earlier	65	1955	66 and 2 months		
1938	65 and 2 months	1956	66 and 4 months		
1939	65 and 4 months	1957	66 and 6 months		
1940	65 and 6 months	1958	66 and 8 months		
1941	65 and 8 months	1959	66 and 10 months		
1942	65 and 10 months	1960 and later	67		
1943-1954	66				

^{*(}For an expected monthly amount of your combined defined contribution plans, divide the combined total by 240 for an estimated monthly payout. (Note: Assumes 20 years in retirement.))

^{**}www.ssa.gov

Retirement readiness

F. Medical/Health Costs

Medical expenses such as prescriptions, home health care, and nursing home care may eat away at your savings. According to Healthview Services' 2017 Retirement Healthcare Costs Data Report, a man retiring at 65 today with a typical lifespan will need \$189,687 to pay healthcare costs not covered by insurance; a woman will need \$214,565.

Prepare now by completing the chart below.

		SPOUSE/	EXPECTED AMOUNTS			
MEDICAL EXPENSE	ME	PARTNER	PER MONTH		PER YEAR	
Health Insurance	0	0	\$	x12=	\$	
Medical Services	0	0	\$	x12=	\$	
Drugs	0	0	\$	x12=	\$	
Medical Supplies	0	0	\$	x12=	\$	
Other	0	0	\$	x12=	\$	
Other	0	0	\$	x12=	\$	
Total						

G. Your retirement budget

Estimating your retirement budget may help you determine how much money you'll need for retirement.

Complete the table below to estimate how much you'll need for expenses in retirement.

YOUR ANNUAL RETIREMENT BUDGET

		Exped	cted expenses	
Medical expense		Per month	Per year	Sample
Housing (rent/mortgage, home maintenance)	\$	x12=	\$	\$12,000/yr
Essentials (food & clothing)	\$	x12=	\$	\$7,500/yr
Health (medical/dental, nursing care)	\$	x12=	\$	\$2,000/yr
Insurance (health, auto, home, life)	\$	x12=	\$	\$6,000/yr
Transportation (repairs, gas, train, bus)	\$	x12=	\$	\$1,000/yr
Utilities (heat, electric, phone, internet)	\$	x12=	\$	\$3,000/yr
Entertainment (travel, hobbies, fun)	\$	x12=	\$	\$3,500/yr
Personal Loans & Credit Cards	\$	x12=	\$	\$2,000/yr
Gifts/Charitable Donations	\$	x12=	\$	\$500/yr
Taxes (income, property, and Social Security)	\$	x12=	\$	\$5,000/yr
Total	\$	x12=	\$	\$42,500/yr

Your retirement savings goal

BUDGET WORKSHEET TO DETERMINE SAVINGS GOAL

		Sample calculation	Your calculation
STEP 1 Approximate Total E	Expenses (from budget worksheet).	\$42,500/yr	\$/yr
STEP 2 Total Estimated Ann	nual Income.	\$22,404*	\$/yr
STEP 3 Subtract the amoun	t in Step 2 from Step 1.	\$20,096	\$/yr
	r of years you expect to be in retirement sy age minus your retirement age).	20 years (life expectancy – 87 retirement age – 67)	\$/yrs
STEP 5 Multiply the amount retirement savings o	t in Step 3 by the number of years in Step 4. This is your goal.	\$401,920 Retirement Savings Goal (\$20,096/yr x 20 years)	\$ Total Retirement Savings Goal*
STEP 6 Enter the value of your and/or 457(b) plans	our current retirement savings (401(k), 401(a), 403(b)	\$25,000	\$
STEP 7 Multiply the amount Plan to retire in	t in Step 6 times a factor from the following table:** 10 years 1.5 15 years 1.8 20 years 2.2 25 years 2.7 30 years 3.2	\$55,000 Retire in 20 years (\$25,000 x 2.2)	\$
STEP 8 Take the amount in Sadditional savings no	Step 5 minus the amount in Step 7. This is your total eeded at retirement.	\$346,920 (\$401,920 – \$55,000)	\$
	l amount you will need to save by multiplying the amount from the following table: 10 years .083 15 years .050 20 years .034 25 years .024 30 years .018	\$11,795 Retire in 20 years (\$346,920 x .034)	\$/yr Annual Savings Goal

^{*} The sample calculation includes a hypothetical Pension amount of \$3,600/year and an amount of \$18,804/year from Social Security, which assumes a salary of \$50,000/year at retirement and receiving a full Social Security benefit at age 67. Please refer to your Social Security statement for more specific information. This sample calculation also assumes that at retirement the account balance is invested in an option where after-tax return will cover inflation. Amounts may vary.

^{**} Factors are based on a hypothetical 4% interest rate, credited annually.

Asset allocation

Help is a website away

MassMutual offers a series of online planning tools and financial calculators. Whether you have a basic or advanced knowledge of investing, you may benefit from the available tools, developed to help you fine-tune your investment strategy.

Retirement planning guidance

MassMutual also offers a more personalized online tool called RetireSMART Ready.* When using this calculator you will be asked a variety of questions.

Based on your answers, the planning tool offers an investment strategy for your consideration. Based on how long you plan to invest and your tolerance for risk, you can implement the strategy that best meets your needs.

Asset allocation can be intimidating, but making sure you have enough allocated in the appropriate investments may help you preserve and grow your savings.

Do you need to play catch-up?

Based on the results of your savings goal calculations, you may need to consider increasing your contribution. Visit

www.massmutual.com/retirementaccess and log in to your account. To make changes

by phone, call **1-800-854-0647**

If you are age 50 or older, your plan may allow you to make additional "catch-up" contributions beyond normal deferral limits.

There are various ways to increase your contribution. Some retirement plans allow you to make changes online, by phone, or by contacting your individual plan administrator or benefits manager. If your plan offers an online contribution feature, go to www.massmutual.com/retirementaccess and log in to your retirement plan website.

To make changes by phone, please call 1-800-854-0647. If you reach age 50 any time in the current calendar year or are already age 50 or older, if your plan allows you may be able to make additional pre-tax "catch-up" contributions above and beyond normal deferral limits.

Asset allocation is the act of balancing risk and reward by apportioning a portfolio's assets according to an individual's financial goals, risk tolerance, and investment horizon. Diversification is a technique that mixes a wide variety of investments within a portfolio. Neither asset allocation nor diversification assure a profit and do not protect against loss in a declining market. There are risks involved with investing, including possible loss of principal.

^{*} Not available in all retirement plans.

Asset allocation

Investor Profile Quiz

Don't know which strategy may be right for you?

Here's an easy way to find out. Take the Investor Profile Quiz below. Simply add up the points to see which investment strategy you should consider.

SECTION 1: TIME HORIZON

1. I plan to withdraw my money in 3 years or less and do not want to lose any of it:

a. Yes b. No

If you answered "yes" to question 1, set your investment course with a Short Term strategy.

If you answered "no," continue to question 2.

2.	My current age is:	
	a. Under 40	5
	b. 40-54	3
	c. More than 55	1
3.	I expect to retire:	
	a. Not for at least 20 years	5
	b. In 5 to 20 years	3
	c. Within 5 years	1

SECTION 2: RISK TOLERANCE

Long-Term Goals

4. For this portfolio, my goal is:

- a. To grow my assets aggressively. . . 5b. To grow my assets with caution. . . 3c. To avoid losing money. 1
- 5. What would I expect from this portfolio over time?
 - a. To generally keep pace with the stock market.
 - b. To make a decent profit, but probably trail the stock market $\,$. $\,$ 3

Short-Term Goals

- 6. Which of these statements would best describe your attitude about the performance of this portfolio over the next three years?

a. I can live if I lose money. 5

- 7. Which of these statements would best describe your attitude about the performance of this portfolio over the next three months?
 - a. Who cares? One calendar quarter means nothing 5
 - b. If I suffered a loss of greaterthan 10%, I'd get concerned 3

SECTION 2: RISK TOLERANCE

(Continued)

Financial Situation

8. If I lost my job tomorrow, I would:
a. Have other sources of income
to last me more than \sin months
b. Have enough cash on hand to
last three to six months
c. Need to tap into my retirement
investment within 30 days

9.	Upon	retirement	my	investment	will
	repre	sent:			

a.	A minor part (less than 25%)					
	of my retirement income				5	
b.	An important part (25%–75%)					
	of my retirement income. $\ . \ .$				(1)	
c.	The vast majority (over 75%)					
	of my retirement income				•	

SECTION 3: INVESTMENT STRATEGY

Add up your points from Questions 2–9 to determine which investment strategy below may be best for you.

Total Points	Investment Strategy		
0-8	Short Term		
9–17	Conservative		
18-27	Moderate		
28-35	Aggressive		
36-40	Ultra Aggressive		

My total: _____

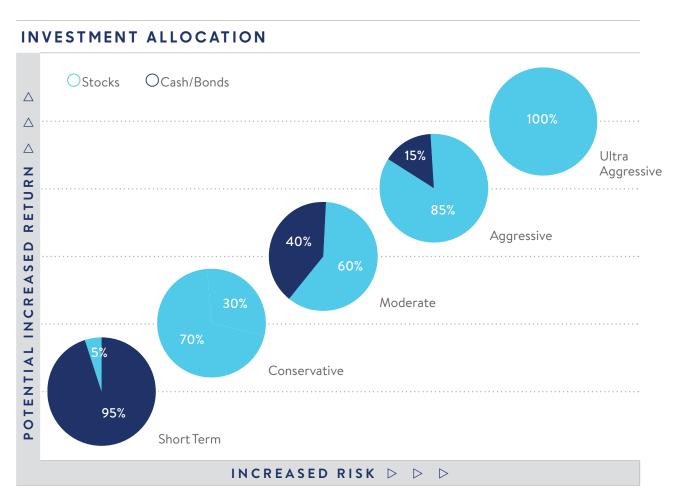
Asset allocation does not assure a profit or protect against a loss in a declining market.

The results of this questionnaire are intended to help you identify the type of investor you may be. Be sure to review the results with your financial professional before investing. This questionnaire is not meant to replace a thorough investment profile that your financial professional would complete with you.

Asset allocation

Choose your investment strategy

Based on the results of the Investor Profile Quiz, consider how to allocate your investments among the different asset classes. The goal should be to maximize the potential return of your savings without taking on more risk than is comfortable for you. When choosing your investment strategy, there are many factors to consider, including, but not limited to: your individual situation, risk tolerance, and current life stage.



The investment charts shown here were designed by MassMutual as examples and do not represent a recommendation or endorsement of any particular investment or investment style.

Asset allocation is the act of balancing risk and reward by apportioning a portfolio's assets according to an individual's financial goals, risk tolerance, and investment horizon. Diversification is a technique that mixes a wide variety of investments within a portfolio. Neither asset allocation nor diversification assure a profit and do not protect against loss in a declining market. There are risks involved with investing, including possible loss of principal.

Staying on strategy

An easy way to keep your investment strategy on course is to use MassMutual's Cruise Control.* Once you have decided on an investment approach, you may need to rebalance periodically to maintain your original risk/reward balance. Cruise Control takes care of rebalancing for you by transferring your assets among your investment options to restore your desired mix on a scheduled basis.

If your plan offers this feature, you can activate it or discontinue the service at any time.

If you have other retirement accounts with previous employers, consider applying the concept of rebalancing to those accounts as well. If this sounds like a lot of work, there may be a simpler option. Consolidating your assets into your current account may help simplify the process of rebalancing.

When I retire from work, can I "retire" from investing?

The short answer is "no." While your focus during the early part of your working years was on building savings, the retirement years need to be focused on making sure your assets last. Remember, it's likely that you will be retired for 15 to 20 years or more. Staying appropriately invested may help reduce your chances of out-living your savings.

Revisit the Investor Profile Quiz in this workbook periodically to see if a new asset allocation strategy is necessary.

Consolidation

Reasons to consolidate your retirement plan accounts:

- SAVE TIME: consolidation may simplify your retirement planning since you'll have a single account to manage.
- POTENTIAL TO SAVE MONEY: consolidation may reduce your fees.
- DIVERSIFICATION: consolidating accounts may eliminate duplication of investment classes across your accounts. Duplication may reduce diversification, which can negatively impact your investment strategy.

Although consolidation may have several benefits, it may not be appropriate or suitable for everyone. Consider your individual situation as well as possible transfer/surrender fees and impact to vested benefits. Consider consulting an independent financial advisor for help.

Use MassMutual's Concierge Service, and a dedicated consolidation specialist will help you through every step of the process.

Take action.

To learn more or get started with your consolidation, call MassMutual at **1-888-526-6905**, 8 a.m. to 8 p.m. ET Mon. – Fri.

Portfolio rebalancing does not assure profit or protect against a loss in a declining market.

^{*} Cruise Control is not recommended when using an asset allocation investment option. Cruise Control functionality is also limited by the MassMutual trade restrictions on international investment options and company stock, if applicable. Not available in all retirement plans.

Distributions

As you get closer to retirement, you will need to consider distribution options. Your retirement plan may offer any of the following options. The distribution decision you make may impact your retirement readiness.

Your option		Your goals	Benefits	Immediate tax		
HIGH	Keep your money invested in the Plan with MassMutual.	Keep it simple Give your retirement money more time to grow tax-deferred until you need it	 Control over your account Same investment options Flexibility to make a different choice later Same information services, including statements and website 	Account balance continues tax-deferred treatment until withdrawn	HIGH	
GE ▷	Roll your money into an IRA or another Retirement Plan.	Choose investment options separate from employer's plan Give your retirement money more time to grow tax-deferred until you need it	Control over your account Flexibility to make a different choice later	Account balance continues tax-deferred treatment until withdrawn Mandatory withholding may apply Potential early withdrawal penalties	△ ≻	
TAX ADVANTAGE	Receive money in installments.*	Collect regular income for retirement Give the rest of your retirement money more time to grow tax-deferred	Easy access to your money Direct deposit available Flexibility to choose and change how much and how often you will receive payments	 Payments are taxed in the year you receive them Age-based penalties may apply Mandatory withholding may apply 		
∇	Purchase an annuity.*	Add to your retirement income Receive money for as long as you live	A reliable source of monthly payments you can count on over your lifetime You will know how much income to expect for easy budgeting	Payments are taxed in the year you receive them		
LOW	Take cash.	Take your money now instead of saving it in retirement	An immediate source of cash for any purpose	Automatic 20% federal income tax withholding Additional federal income taxes depending on your tax bracket Possible state and local taxes Potential early withdrawal penalty	ГОМ	

^{*} Your plan may not offer all of these options. Refer to the Benefits Estimates page on www.massmutual.com/retirementaccess for complete details on your plan options and for further details on tax implications in the Special Tax Notice.

Tools and information

Your account website

Manage your account, perform transactions, and access education and planning tools online at www.massmutual.com/retirementaccess

- Education Learn to make smarter retirement decisions.
- Calculators Use a wide array of financial and retirement calculators to determine the right saving approach.
- Investment Research Explore all of the investment options within your plan.
- Retirement Planning Determine the most appropriate investment strategy based on your specific situation.

Statements

It is important to review your quarterly statement. It provides information about your plan's investment options, transaction activity, balances, and overall investment performance. Your statement may also include messages that affect your plan. To access your statement, go to 1-800-854-0647 and log into your account.

Participant Information Center 1-800-854-0647

Talk to a MassMutual Customer Service Specialist.

Our award-winning Call Center is staffed with friendly customer service representatives that are available to help you find answers to questions and guide you through transactions Monday — Friday, 8 a.m. to 8 p.m., ET.

Retirement checklist

Be ready for retirement

- O Consider the lifestyle you want:
 - Leisure possibilities (such as entertainment, sporting events, travel, hobbies, courses)
 - Volunteer opportunities list
 - · Life as a grandparent
- O Complete the worksheets in this book:
 - Track down all retirement accounts, including those from past employers
 - Prioritize your saving strategy remember, you can borrow for most major expenses, but you can't take a loan for retirement
 - Consider college expenses (children, grandchildren, other)
- O Research your need for disability income and long-term care insurance
- O Legal/estate planning:
 - Meet with an attorney to prepare a will, living trust, and advance directives such as Power of Attorney, Durable Power of Attorney for Health Care
 - Establish a file at home with important paper work and tell a trusted person where the file is

- O Three months to one year before retirement:
 - · Medical checkup while still working
 - · Register with your Social Security office
 - If you're a veteran, check with the Veterans' Administration office regarding potential retirement benefits
 - · Review your budget and make sure it's realistic
 - Talk to your Human Resources/Benefits Department
 - Research downsizing or relocation options

Retirement references

GENERAL

 American Association of Retired Persons (AARP) at 1-888-OUR-AARP or www.aarp.org

LIFESTYLE

Volunteer opportunities

- The Points of Light Foundation, 1625 K Street NW, Suite 500 Washington, DC 20006 (404-979-2900 or www.pointsoflight.org)
- The Retired and Senior Volunteer Program (RSVP)
 (www.seniorcorps.org)

Life as a grandparent

- Grandparent Information Center, c/o America Association of Retired Persons, 601 E Street NW Washington, DC 20049 (1-888-OUR-AARP or www.aarp.org/grandparents)
- Corporation for National and Community Service, Senior Services Division, 1201 New York Ave. NW Washington, DC 20525 (1-800-942-2677 or www.nationalservice.gov)

Caring for parents

- Family Caregiver Alliance
 (1-800-445-8106 or www.caregiver.org)
- National Alliance for Caregiving (301-718-8444 or www.caregiving.org)

Working for yourself

United States Small Business Administration 409 3rd Street SW, Washington, DC 20416 (1-800-U-ASK-SBA or www.sba.gov)

RETIREMENT INCOME

- MassMutual Retirement Services (1-800-743-5274 or www.retiresmart.com)
- Finding lost pensions The Pension Benefit Guaranty Corporation, Missing Participant Program, 1200 K Street NW Washington, DC 20005-4026 (1-800-326-LOST or www.pbgc.gov)
- Social Security Administration (1-800-772-1213 or www.ssa.gov)

COLLEGE SAVINGS

- Section 529 College Savings Plans and Coverdell Education Savings Accounts
- · www.savingforcollege.com
- www.massmutual.com
- www.retiresmart.com

LONG-TERM CARE AND DISABILITY INCOME INSURANCE

- Life Happens (1-888-543-3777 or www.lifehappens.org)
- www.massmutual.com

MEDICARE, MEDIGAP, AND MEDICAID

- Medicare Compare (1-800-633-4227 or www.medicare.gov)
- Centers for Medicare and Medicaid Services (1-877-267-2323 or www.cms.gov)

Notes:

Notes:



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