MassMutual Ascend
Life Insurance Company

Index Achiever Advisory

A registered index-linked annuity from MassMutual Ascend Life Insurance Company

Confidently plan for your future with the Index Achiever Advisory

When you envision a future that fulfills you, maybe you see yourself traveling, cooking, spending time with family or discovering a new hobby. Whatever it is, our goal is to help you navigate your future with confidence.

THE INDEX ACHIEVER ADVISORY REGISTERED INDEX-LINKED ANNUITY OFFERS:

Growth opportunity

You can allocate your money to indexed strategies that may help you accumulate additional savings without investing directly in the market.

Tax treatment that allows faster growth

Your money may grow at a faster rate since taxes are deferred until you take a withdrawal or annuitize your contract.

Partial protection from loss

Each indexed strategy limits your risk exposure with a floor, buffer or downside participation rate.

No fees

The Index Achiever Advisory has no upfront or recurring charges, meaning all of your money goes to work for you. A market value adjustment will apply to withdrawals or surrenders during the first six contract years.

Access to your money

While annuities are long-term products, we understand the need for liquidity. With this product, you can allocate up to 12% of your account value to the declared rate strategy, which you can make a withdrawal from at any time, penalty-free.

A legacy for your loved ones

The Index Achiever Advisory offers a return of premium death benefit that can help ensure your loved ones are taken care of in the event of your passing. The death benefit is the greater of the account value or purchase payments reduced proportionately for withdrawals.

Guaranteed income

Unlike equity and fixed income investments, the Index Achiever® Advisory provides the opportunity to turn the money you've accumulated in your annuity into a guaranteed stream of income that can last for the rest of your life.

The Index Achiever Advisory is a security that can only be sold through a Broker/Dealer that is contracted with MassMutual Ascend Life Insurance Company. This material must be preceded or accompanied with a prospectus. To obtain a copy of the prospectus, visit MassMutualAscend.com/RILArates.

Why consider an annuity as part of your financial strategy?

Investing in the stock market can be a lucrative way to grow your savings. However, with no protection against loss, market downturns could cause your nest egg to take a significant hit. To avoid losses, you may turn to fixed income investments, but mitigating your risk could mean getting little in return. **If you are looking for a solution that can complement your investment portfolio with growth opportunity and reduced downside risk, the Index Achiever® Advisory registered index-linked annuity might be the answer.**

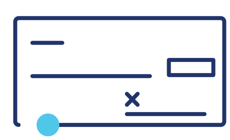
What is an annuity?

An annuity is a financial product that's designed to provide complete or partial downside protection, growth potential and a stream of guaranteed income. In fact, other than pensions, **annuities are the only products that provide guaranteed lifetime income.**

HERE'S HOW IT WORKS:

You purchase an annuity by making a payment to an insurance company.

Your annuity can grow in value over time.



When you're ready to start receiving income, your annuity can be turned into a steady stream of payments.

Market Loss	Required Return
-10%	11%
-20%	25%
-30%	43%
-40%	67%
-50%	100%
-60%	150%
-70%	233%

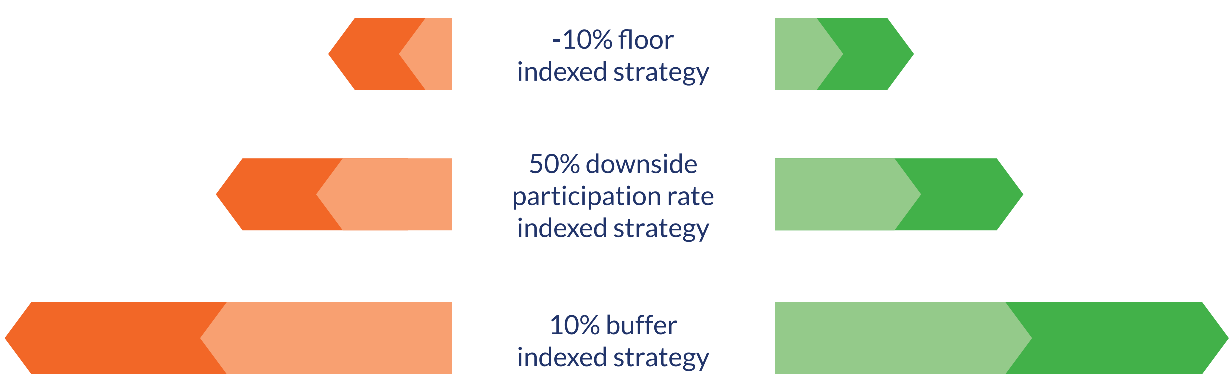
Easier recovery from loss with reduced market exposure

It can take a significant return to recover from a market loss. Take a look at the returns that would be required to break even after various market downturns.

When you purchase an Index Achiever Advisory annuity, you choose from indexed strategies that are linked to the values of external indexes or exchange traded funds. The Index Achiever Advisory offers indexed strategies with three types of downside protection: -10% floor, 50% downside participation rate and 10% buffer. All types of indexed strategies provide market-linked growth potential and partial downside protection, which can make it easier to recover from market downturns.

Managing risk and reward with indexed strategies

Like with most investments, with greater risk comes greater opportunity for reward. With three types of downside protection to choose from, you can align your strategy allocations to your risk tolerance.



Indexed strategy:
Floor with cap

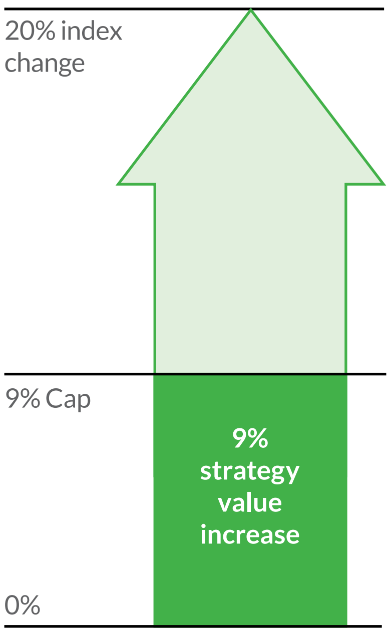
The Index Achiever® Advisory offers a 1-year -10% floor indexed strategy, which provides earning potential up to a cap and protects against index losses in excess of -10% each 1-year term.

HERE'S HOW IT WORKS:

- If the index change is positive at the end of a term, the strategy value grows, up to a cap
- If the index change is negative at the end of a term, the strategy value is protected against index losses in excess of -10%
  - If the negative index change is between 0 and -10%, the strategy value will decrease by the negative index change
  - If the negative index change is greater than -10%, the strategy value decrease is limited to -10%

Let's take a look at how a -10% floor with cap strategy value would have changed in the event of positive and negative index performance.

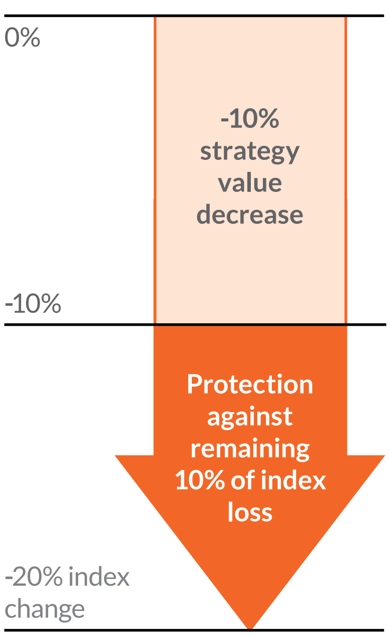
The following example illustrates hypothetical -10% floor with cap strategy returns when the index change is **positive** and **negative**. The example assumes the -10% floor with cap strategy offered a 9% cap.



The example shows how a 20% index change would result in strategy value growth, up to the 9% cap.

Different index changes would result in different strategy value changes. The table below shows alternative index changes and their resulting strategy value changes.

INDEX CHANGE	STRATEGY VALUE
20%	9%
15%	9%
10%	9%
5%	5%
0%	0%



The example shows how a -20% index change would result in strategy value loss. The -10% floor limited losses to -10%

Different index changes would result in different strategy value changes. The table below shows alternative index changes and their resulting strategy value changes.

INDEX CHANGE	STRATEGY VALUE
-5%	-5%
-10%	-10%
-15%	-10%
-20%	-10%

Indexed strategy: Downside participation rate with upside participation rate

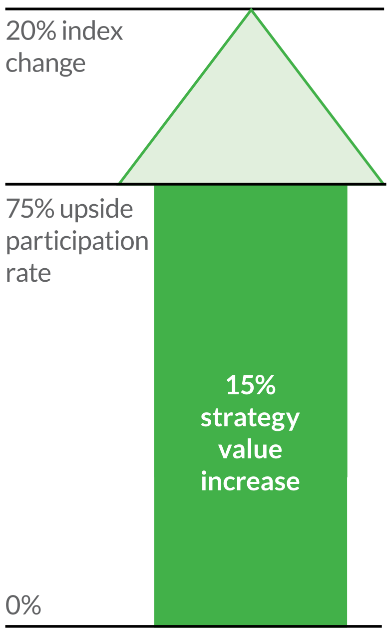
The Index Achiever® Advisory offers 1-year 50% downside participation rate strategies, which provide earning potential limited by an upside participation rate and protect against half of index losses with a 50% downside participation rate each 1-year term.

HERE'S HOW IT WORKS:

- If the index change is positive at the end of a term, the strategy value grows, limited by an upside participation rate
- If the index change is negative at the end of a term, the strategy value decreases, limited by the 50% downside participation rate

Let's take a look at how a 50% downside participation rate with upside participation rate strategy value would have changed in the event of positive and negative index performance.

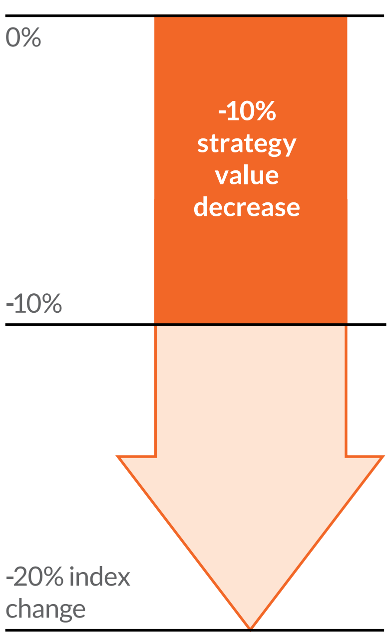
The following example illustrates hypothetical 50% downside participation rate with upside participation rate strategy returns when the index change is **positive** and **negative**. The example assumes the 50% downside participation rate with upside participation rate strategy offered a 75% upside participation rate.



The example shows how a 20% index change would result in strategy value growth, limited by the 75% upside participation rate (20% index change x 75% upside participation rate).

Different index changes would result in different strategy value changes. The table below shows alternative index changes and their resulting strategy value changes.

INDEX CHANGE	STRATEGY VALUE
20%	15%
15%	11.25%
10%	7.5%
5%	3.75%
0%	0%



The example shows how a -20% index change would result in strategy value loss, limited by the 50% downside participation rate (-20% index change x 50% downside participation rate).

Different index changes would result in different strategy value changes. The table below shows alternative index changes and their resulting strategy value changes.

INDEX CHANGE	STRATEGY VALUE
-5%	-2.50%
-10%	-5%
-15%	-7.5%
-20%	-10%

Indexed strategy:
Buffer with cap

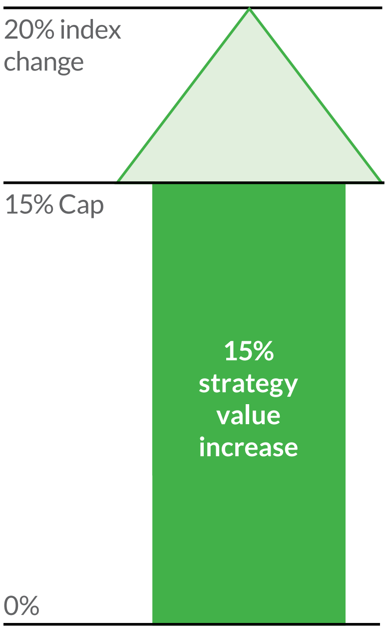
The Index Achiever® Advisory offers 1-year 10% buffer indexed strategies, which provide earning potential up to a cap and protect against the first 10% of index losses each 1-year term.

HERE'S HOW IT WORKS:

- If the index change is positive at the end of a term, the strategy value grows, up to a cap
- If the index change is negative at the end of a term, the strategy value is protected against the first 10% of the index loss
    - If the negative index change is between 0 and -10%, the strategy value will not decrease
    - If the negative index change is greater than -10%, the strategy value will decrease by the remaining loss in excess of -10%

Let's take a look at how a 10% buffer with cap strategy value would have changed in the event of positive and negative index performance.

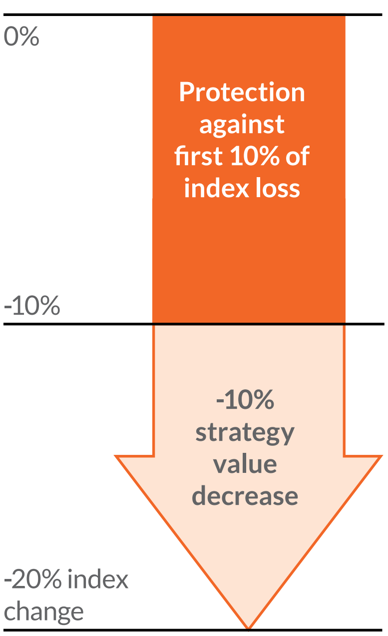
The following example illustrates hypothetical 10% buffer with cap strategy returns when the index change is **positive** and **negative**. The example assumes the 10% buffer with cap strategy offered a 15% cap.



The example shows how a 20% index change would result in strategy value growth, up to the 15% cap.

Different index changes would result in different strategy value changes. The table below shows alternative index changes and their resulting strategy value changes.

INDEX CHANGE	STRATEGY VALUE
20%	15%
15%	15%
10%	10%
5%	5%
0%	0%



The example shows how a -20% index change would result in strategy value loss. The buffer proctected against the first 10% of the loss, and the strategy value decreased by the remaining 10%.

Different index changes would result in different strategy value changes. The table below shows alternative index changes and their resulting strategy value changes.

INDEX CHANGE	STRATEGY VALUE
-5%	0%
-10%	0%
-15%	-5%
-20%	-10%

Indexed strategy: Buffer with upside participation rate

The Index Achiever® Advisory offers a 6-year 10% buffer indexed strategy, which provides earning potential limited by an upside participation rate and protects against the first 10% of index losses each 6-year term.

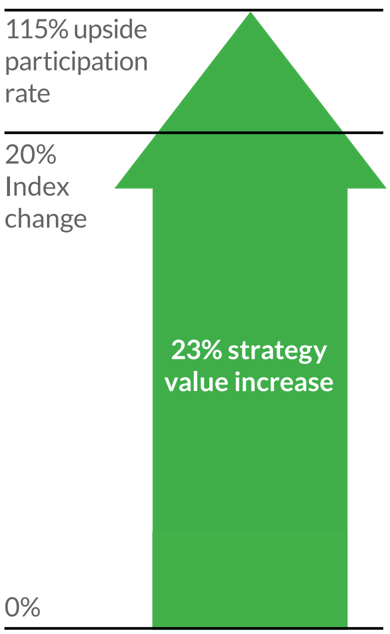
HERE'S HOW IT WORKS:

- If the index change is positive at the end of a term, the strategy value grows, limited by an upside participation rate
- If the index change is negative at the end of a term, the strategy value is protected against the first 10% of the index loss
    - If the negative index change is between 0 and -10%, the strategy value will not decrease
    - If the negative index change is greater than -10%, the strategy value will decrease by the remaining loss in excess of -10%

Let's take a look at how a buffer with upside participation rate strategy value would have changed in the event of positive and negative index performance.

The S&P 500 6-Year 10% Buffer with Upside Participation Rate Strategy is only available for a term that starts in the first contract year.

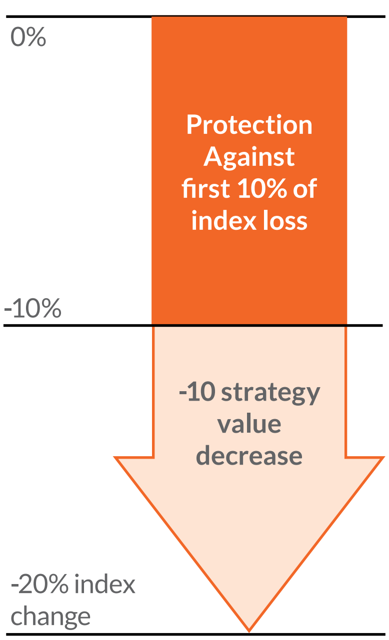
The following example illustrates hypothetical 10% buffer with upside participation rate strategy returns when the index change is **positive** and **negative**. The example assumes the 10% buffer with upside participation rate strategy offered a 115% upside participation rate.



The example shows how a 20% index change would result in strategy value growth, limited by the 115% upside participation rate (20% index change x 115% upside participation rate).

Different index changes would result in different strategy value changes. The table below shows alternative index changes and their resulting strategy value changes.

INDEX CHANGE	STRATEGY VALUE
20%	23%
15%	17.25%
10%	11.5%
5%	5.75%
0%	0%



The example shows how a -20% index change would result in strategy value loss. The buffer proctected against the first 10% of the loss, and the strategy value decreased by the remaining 10%.

Different index changes would result in different strategy value changes. The table below shows alternative index changes and their resulting strategy value changes.

INDEX CHANGE	STRATEGY VALUE
-5%	0%
-10%	0%
-15%	-5%
-20%	-10%

Diversify your earning potential

Now that you know how caps, floors, buffers and participation rates are applied within indexed strategies, let's take a look at the underlying index and exchange traded funds (ETFs) that these indexed strategies are linked to:

- **S&P 500® Index:** Includes stocks issued by 500 of the top companies in leading industries of the U.S. economy
- **iShares MSCI EAFE ETF:** Seeks to track the investment results of an index composed of developed market equities, including those in Europe, Australia, Asia and the Far East, but excluding the U.S. and Canada
- **iShares U.S. Real Estate ETF:** Seeks to track the performance of the Dow Jones U.S. Real Estate Index, which is composed primarily of U.S. equities in the real estate sector and real estate investment trusts (REITs)
- **SPDR Gold Shares ETF:** Designed to reflect the market value of gold bullion

By allocating your money among the various strategies, you can diversify your earning potential.

The underlying index and ETFs are well-known, which means their daily value information is readily available from reliable and credible sources.

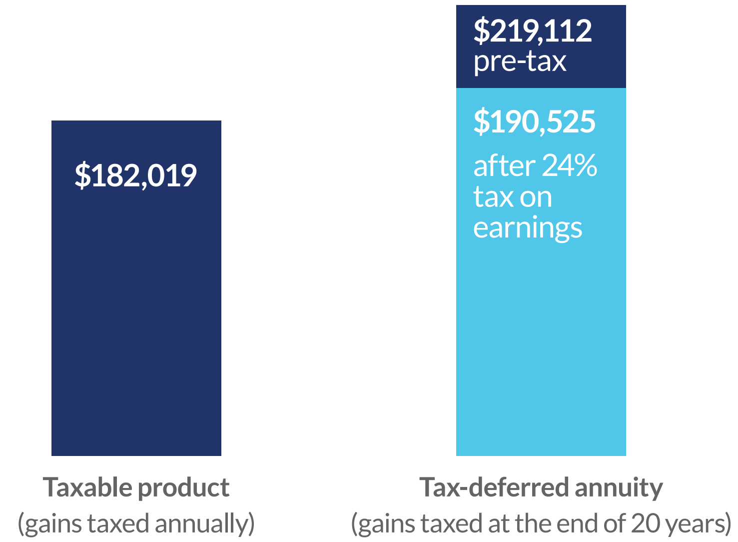
Not all strategies available with all indexes and ETFs. See page 20 for list of available strategies.

The power of tax deferral

Many investment vehicles are subject to income tax on an annual basis. With an Index Achiever® Advisory, you can defer paying taxes until you take a withdrawal, allowing your money to grow at a faster rate.

The following chart shows how a purchase payment of $100,000 grows in a tax-deferred annuity compared to a taxable product over the course of 20 years.

After paying a 24% tax on its earnings, the tax-deferred annuity outgrew the taxable product by more than $8,000. This increased growth can help you accumulate more income for your retirement years.



This graph assumes the taxable product and the tax-deferred annuity grow at an annual rate of 4%. This is a hypothetical scenario for illustration purposes only, and does not reflect interest rates of any specific annuity offered by MassMutual Ascend. For the taxable product, the graph also assumes the amount needed to pay taxes is deducted annually and no other withdrawals are taken during the 20-year period. For the tax-deferred annuity, it assumes no withdrawals are taken during the 20-year period. The hypothetical returns shown above do not take into account any contract fees, which would reduce earnings. The rate of return presented does not represent a guaranteed rate.

This graph assumes the investing party has a marginal tax bracket of 24%. In 2022, the 24% tax bracket for a married couple applies to taxable income over $178,150 and not over $340,100. Capital gains and dividend tax rates may be lower than the 24% illustrated rate and change the comparison results. Consider your current and anticipated tax brackets in making your investment decisions, as they may also impact comparison results. This graph compares a $100,000 taxable investment to a $100,000 tax-deferred investment, such as a non-qualified annuity. Certain qualified investments, such as a traditional IRA, offer an upfront tax deduction or exclusion for contributions. Other qualified investments, such as a Roth IRA, offer a tax exclusion for earnings. The value of these additional benefits is not illustrated. If you are under age 59½, the taxable amount withdrawn from a qualified or non-qualified annuity is generally subject to a 10% federal penalty tax.

This information is not intended or written to be used as legal or tax advice. It was written solely to provide general information and support the sale of annuity products. You should seek advice on legal or tax questions based on your particular circumstances from an attorney or tax advisor.

All guarantees subject to the claims-paying ability of MassMutual Ascend. Registered index-linked annuities involve risk and may not be suitable for all investors. Any sales solicitation must be accompanied or preceded by a prospectus.

It's important to consider your liquidity needs

The Index Achiever Advisory is intended to be a long-term product. Because of this, a market value adjustment (MVA) will apply to withdrawals from indexed strategies during the first six contract years. The MVA does not apply to withdrawals taken from the declared rate strategy, which provides complete downside protection and earns interest at a fixed rate.

A maximum of 12% can be allocated to the declared rate strategy each term. If access to your money is a priority for you, consider allocating to the declared rate strategy — and rest assured that if your needs change over time, you can adjust your allocations among strategies at the end of each term.

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If you withdraw money from an indexed strategy before the end of a term, it will affect your return for that term and may have a significant negative effect.

For annuity contracts, income earned on the contract is subject to income tax as ordinary income when withdrawn. If you are under age 59½, the taxable amount may also be subject to a 10% federal penalty tax. Generally income tax rates on ordinary income are higher than capital gains tax rates on long-term capital gains and qualified dividend income.

Photo submitted by
Carol from **New York**,
valued annuity customer
since **2011.**

MassMutual Ascend

Taking financial futures above and beyond

At MassMutual Ascend, we are committed to going above and beyond – so when it comes to your financial future, the impossible feels possible.

As a leading provider of annuities, we see our products as more than just contracts. Our annuities are transparent and easier to understand, so you always know what to expect.

We have a long history of financial strength and stability. We've received an "A" or higher rating by AM Best for more than 40 years, so you can have confidence knowing we'll be here when you need us. We are a wholly owned subsidiary of MassMutual, one of the largest life insurance companies in the U.S., founded in 1851.

And finally, everything we do is rooted in a culture of service. From our people to our technology, we strive to always provide you with what you need, when you need it.

The status quo isn't a status we ever want. At MassMutual Ascend, we'll always be in pursuit of better – so you can navigate your future with confidence.

Learn more at MassMutualAscend.com.

Index Achiever Advisory features

ISSUE AGES	**Qualified:** 0–80 **Non-qualified:** 0–80 **Inherited IRA:** 0–75 **Inherited non-qualified:** 0–75
PURCHASE PAYMENTS	You can purchase this annuity with an initial purchase payment of $25,000 or more. You can add to your annuity during the first two contract months with additional purchase payments of at least $10,000.
FEES	There are no upfront charges. All your money goes to work for you. Keep in mind you will pay a fee to your investment advisor for the services he or she provides, but you will not pay administrative fees to MassMutual Ascend.
MARKET VALUE ADJUSTMENT (MVA)	During the first six contract years, an MVA will apply if the contract is surrendered or a withdrawal is taken from indexed strategies. An MVA is an adjustment to the withdrawal based on how market interest rates have changed since the contract was purchased. Interest rate changes are determined based on the BofA Merrill Lynch 5-10 Year US Corporate Bond Index from the Contract Effective Date and the amount of time remaining until the sixth Contract Anniversary. Depending on how interest rates have moved, the MVA may increase or decrease contract values. Withdrawals taken from indexed strategies are subject to a market value adjustment. The amount withdrawn from an indexed strategy is then multiplied by the MVA factor. *For more information on how the MVA works, refer to the contract and prospectus.*
MVA EXCEPTIONS	The MVA does not apply to any withdrawals taken from the declared rate strategy. A maximum of 12% can be allocated to the declared rate strategy for initial allocations and reallocations at the end of a term. The MVA also does not apply to amounts taken from an indexed strategy to pay for advisory fees.
CREDITING STRATEGIES	**Declared rate** **S&P 500® Index** • 1-Year -10% Floor with Cap • 1-Year 50% Downside Participation Rate with Upside Participation Rate • 1-Year 10% Buffer with Cap • 6-Year 10% Buffer with Upside Participation Rate **iShares MSCI EAFE ETF** • 1-Year 50% Downside Participation Rate with Upside Participation Rate • 1-Year 10% Buffer with Cap **iShares U.S. Real Estate ETF** • 1-Year 50% Downside Participation Rate with Upside Participation Rate • 1-Year 10% Buffer with Cap **SPDR Gold Shares ETF** • 1-Year 50% Downside Participation Rate with Upside Participation Rate • 1-Year 10% Buffer with Cap *A cap will never be lower than 1% and a participation rate will never be lower than 5%.* *The S&P 500 6-Year 10% Buffer with Upside Participation Rate Strategy is only available for a term that starts in the first contract year.* *Available strategies may vary by state and by distribution.*

INDEXED STRATEGY VALUES	The value of an indexed strategy changes from day to day throughout each term. The method used to calculate the strategy value depends on whether the value is being calculated at the end of a term or during a term. At the end of a term, the value of an indexed strategy is increased for any rise in the applicable index/ETF over the term or decreased for any fall in the applicable index/ETF over the term. Any increase for the term is limited by a cap or upside participation rate. Any decrease for the term is limited by a floor, buffer or downside participation rate. **Before the end of a term, the value of an indexed strategy is increased or decreased by the daily value percentage. The daily value percentage is not tied directly to the underlying index, but is based on the prices of hypothetical options related to the index, adjusted for the costs of acquiring and exiting such options.** The prospectus that preceded or accompanies this brochure contains more information about the risks of investing in this contract, how withdrawals affect strategy values, a more detailed explanation of how strategy values are calculated and examples of such calculations.
EXTENDED CARE WAIVER RIDER	After the first contract year, if you are confined to a hospital, nursing home or long-term care facility for at least 90 consecutive days, you have the option to withdraw up to 100% of the account value without incurring a negative market value adjustment. To qualify under this rider, a hospital, nursing home or long-term care facility must provide nursing services 24 hours a day and the confinement must be prescribed by a physician and be medically necessary, and comply with other terms and conditions set out in the rider. *Not available in Massachusetts. In California, the Extended Care Waiver Rider has been replaced with the Waiver of Early Withdrawal Charges for Facility Care or Home Care or Community-Based Services Rider, which provides for a waiver of early withdrawal charges under an expanded variety of circumstances.*
TERMINAL ILLNESS WAIVER RIDER	After the first contract year, if you are diagnosed by a physician as having a terminal illness, you have the option to withdraw up to 100% of the account value without incurring a negative market value adjustment. A terminal illness is defined as having a prognosis of survival of 12 months or less, or a longer period as required by state law. This waiver may be used only once. *Not available in Massachusetts.*
PAYOUT OPTIONS	The following payout options are available following the first contract year: **Fixed period:** You receive payments for a fixed period of time that you select. **Life:** You receive payments for life. **Life with payments for fixed period:** You receive payments for life. If you pass away before the end of the minimum fixed period you select, the remaining payments are paid to the person you designate. **Joint and one-half survivor:** Payments are guaranteed for your life and the life of a designated joint annuitant. If you are survived by the joint annuitant, he or she will receive 50% of the payment for life.
DEATH BENEFIT VALUE	The death benefit amount is the greater of the account value or the purchase payments, reduced proportionally for all withdrawals, but no including amounts applied to pay negative market value adjustments. In either case, it is reduced by premium tax or other taxes not previously deducted.
STATE VARIATIONS	The Declared Rate Strategy is not available for Missouri contracts. Missouri contracts have a Temporary Holding Account that pays interest at the guaranteed minimum interest rate that would apply to the Declared Rate Strategy. Like the Declared Rate Strategy, amounts withdrawn from the Temporary Holding Account are not subject to a Market Value Adjustment, and allocations to the Temporary Holding Account are subject to a 12% maximum.

The Index Achiever Advisory is a security that can only be sold through a Broker/Dealer that is contracted with MassMutual Ascend Life Insurance Company. This material must be preceded or accompanied with a prospectus. To obtain a copy of the prospectus, visit MassMutualAscend.com/RILArates.

Annuities are intended to be long-term products and may not be suitable for all investors. Withdrawals from an annuity contract may have tax consequences.

The information in this brochure is not intended or written to be used as legal or tax advice. It was written solely to provide general information and support the sale of annuity products. You should seek advice on legal or tax questions based on your particular circumstances from an attorney or tax advisor.

For qualified contracts, amounts withdrawn are generally subject to income tax. For other contracts, only the gains are subject to income tax. If you are under age 59½, the taxable amount is also generally subject to a 10% federal penalty tax.

Buying an annuity within a tax-deferred retirement plan does not provide any extra tax benefits.

MassMutual Ascend is not an investment adviser and the information provided in this document is not investment advice. You should consult with your investment professional for advice based on your personal circumstances and financial situation.

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Please note, this is a general description of the product. Please read your contract, including the endorsements and riders, for definitions and complete terms and conditions, as this is a summary of the annuity's features. For use with contract forms P1841622NW and P1841622ID, and rider forms R1462416NW and R1462316NW (not available in Massachusetts). Contract and rider form numbers may vary by state. Products and features may vary by state, and may not be available in all states.

Principal Underwriter/Distributor: MM Ascend Life Investor Services, LLC, member FINRA and an affiliate of MassMutual Ascend Life Insurance Company.

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All guarantees are subject to the claims-paying ability of MassMutual Ascend℠.

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