

TSA II Annuity Contract

Contract and Performance Information as of January 2, 2023

MassMutual Ascend Life Insurance Company®

For use with contract form number A101(84). Form numbers may vary by state.

Overview. TSA II is an individual deferred annuity contract issued by MassMutual Ascend Life Insurance Company (MMALIC), formerly known as, Great American Life Insurance Company. Annuities are insurance contracts that allow the participant or beneficiary to receive a guaranteed stream of payment at regular intervals, usually beginning when the participant retires and lasting for his/her entire life or a fixed period he/she selects. **Guarantees related to the contract are subject to MMALIC's long-term financial strength and claims-paying ability.**

In this document, "you" and "your" refer to an individual participant or beneficiary.

Part I. Performance Information. The contract is an investment option that has a fixed rate of return. The table below contains information about the rate of return, the term or length of time you will earn that rate, and other information relevant to performance.

Name / Type of Option	TSA II is an individual deferred fixed annuity contract.
Return	See explanation in "Other" below.
Term	N/A
Other	<p>The annuity value of the contract is credited with interest at the annuity value interest rate. The surrender value of the contract is credited with interest at the surrender value interest rate. The surrender value interest rate may be lower than the annuity value interest rate. MMALIC may change these interest rates at any time. The annuity value interest rate and surrender value interest rate may not be lower than the guaranteed minimum interest rate. The guaranteed minimum interest rate is 3.00% or 4.00%, depending on the date that your contract was issued. The guaranteed minimum interest rate for your contract is set out in the Annuity Value—Interest and Surrender Value Interest provisions of your contract.</p> <ul style="list-style-type: none">• The annuity value interest rate varies by purchase payment deposit date and by the guaranteed minimum interest rate of your contract. The annuity value interest rate on January 2, 2023, ranged from the guaranteed minimum interest rate to the sum of the guaranteed minimum interest rate plus 0.05%.• The surrender value interest rate on January 2, 2023, was equal to the guaranteed minimum interest rate.
Additional Information	Information about current interest rates applicable to your contract is available at 1-800-854-3649.

Part II. Fee and Expense Information. The table below shows fee and expense information related to the contract. It also includes a summary of restrictions and limitations that apply to purchase payments and withdrawals.

Name / Type of Option	TSA II is an individual deferred fixed annuity contract.
Total Annual Operating Expenses	N/A
Shareholder-Type Fees See Part III for more information.	<p><u>Fees Charged Directly Against Your Investment</u></p> <ul style="list-style-type: none">• A proportionality adjustment will apply to any withdrawal from the contract. This means that the annuity value of the contract will be reduced on account of a withdrawal in the same proportion that the withdrawal reduces the surrender value. Thus, for example, if a withdrawal reduces the surrender value by 21%, then it will also reduce the annuity value by 21%.• MMALIC currently charges 7.5% interest on loans taken under the contract.
Restrictions	<p><u>Purchase Payments.</u> Purchase payments are subject to any minimum amounts that MMALIC may from time to time require.</p> <p><u>Withdrawals.</u> Minimum of \$500; after a withdrawal, your remaining surrender value (if any) must be at least \$500.</p> <p>Purchase payments and withdrawals are subject to tax law and applicable employer plan restrictions.</p>

The cumulative effect of fees and expenses can substantially reduce the growth of retirement savings. Visit the Department of Labor's Web site for an example showing the long-term effect of fees and expenses at <https://www.dol.gov/sites/default/files/ebsa/about-ebsa/our-activities/resource-center/publications/a-look-at-401k-plan-fees.pdf>.

Fees and expenses are only one of many factors to consider when deciding to invest in an option. You may also want to think about whether an investment in a particular option, along with your other investments, will help you to achieve your financial goals.

Part III. Annuity Information. This table contains a summary of certain features of the contract. For more information about these features, see your contract.

Name / Issuer	TSA II / MassMutual Ascend Life Insurance Company® (MMALIC)
Objective / Goal	The contract is a deferred annuity. It is designed to be a long-term investment, to meet retirement and other long-range goals. It is designed to provide stability of principal and guarantee a minimum rate of return.
Benefits	<p>Annuity Benefit. The contract will provide a guaranteed stream of income to you at some future date. These payments will be based on your annuity value to the extent applied to payments: (1) for life; (2) over a period of at least 3 years. Otherwise, these payments will be based on your surrender value.</p> <p>The annuity benefit amount will be reduced by any applicable premium tax or other tax not previously deducted, and the outstanding balance of any loans.</p> <p>Contract Values.</p> <ul style="list-style-type: none"> The <i>annuity value</i> of your contract at any time is equal to: (1) 100% of the purchase payments; minus (2) proportionality adjustments for all withdrawals; plus (3) interest earned at the annuity value interest rate; and minus (4) premium tax or other taxes, if applicable. The <i>surrender value</i> of your contract at any time is equal to: (1) 80% of first year purchase payments and 100% of other purchase payments, minus (2) all withdrawals; plus (3) interest earned at the surrender value interest rate; and minus (4) premium tax or other taxes, if applicable. At the end of contract years 5 through 14, the surrender value will be increased by 2% of the first year purchase payments if at the end of such year your surrender value is at least equal to three times your first year purchase payments. <p>Death Benefit. The contract includes a death benefit payable to your beneficiary if you die before your annuity commencement date and before your contract is surrendered. The death benefit will be based on your annuity value as of the date of death. The death benefit amount will be reduced by any applicable premium tax or other tax not previously deducted; and the outstanding balance of any loans.</p> <p>Settlement Options. The standard forms of settlement options are listed below.</p> <ul style="list-style-type: none"> <i>Income for a Fixed Period:</i> MMALIC will make periodic payments for a fixed period. <i>Life Annuity with Payments for at Least a Fixed Period:</i> MMALIC will make periodic payments until the death of the person on whose life payments are based. If selected, we guarantee that such payments shall continue for at least a minimum fixed period even if the person should die before the end of that fixed period. <i>Joint and One-half Survivor Annuity:</i> MMALIC will make periodic payments until your death. Thereafter, we will make 1/2 of the periodic payment until the death of the joint annuitant that you select. <p>The contract provides other options. MMALIC may offer additional options from time to time. Periodic payments under a settlement option are affected by various factors, including the length of the payment period, your life expectancy, the life expectancy of the joint annuitant, and the frequency of the payment interval.</p>
Pricing Factors	<p>The interest rates credited to your contract take into account the costs of providing benefits to you under your contract.</p> <p>Depending on the issue date of your contract, the 1971 Individual Annuity Table with interest at 4% per year, compounded annually, or the 1983 Individual Annuity Mortality Table with interest at 3% per year, compounded annually, based on the sex of the payee, is used to compute all guaranteed settlement option factors, values, and benefits under the contract, except as otherwise provided by any unisex endorsement attached to the contract. The annuity table and interest rate for your contract are set out in the Non-Forfeiture Computations provision of your contract.</p>
Fees	<p>Proportionality Adjustments. A proportionality adjustment will apply to any withdrawal from the contract. This means that the annuity value of the contract will be reduced on account of a withdrawal in the same proportion that the withdrawal reduces the surrender value. Thus, for example, if a withdrawal reduces the surrender value by 21%, then it will also reduce the annuity value by 21%.</p> <p>Interest on Loans. If loans are available under your contract and you borrow money under the loan provisions, MMALIC will charge interest on the loan. MMALIC currently charges 7.5% interest on loans. MMALIC will charge a higher interest rate if the plan administrator directs MMALIC to do so.</p>
Limitations	<p>Settlement Option Limitations.</p> <ul style="list-style-type: none"> You may not change your annuity commencement date to a date that is later than the contract anniversary following your 95th birthday. Payments under a settlement option are subject to any minimum amounts, payment intervals, and other terms and conditions that MMALIC may from time to time require. All elected settlement options must comply with pertinent laws and governmental regulations and rulings. <p>Other Policy Limitations. Restrictions on purchase payments and withdrawals are summarized in Part II.</p>

TSA I Annuity Contract

Contract and Performance Information as of January 2, 2023

MassMutual Ascend Life Insurance Company®

For use with contract form number A100(81). Form numbers may vary by state.

Overview. TSA I is an individual deferred annuity contract issued by MassMutual Ascend Life Insurance Company (MMALIC), formerly known as, Great American Life Insurance Company. Annuities are insurance contracts that allow the participant or beneficiary to receive a guaranteed stream of payment at regular intervals, usually beginning when the participant retires and lasting for his/her entire life or a fixed period he/she selects. **Guarantees related to the contract are subject to MMALIC's long-term financial strength and claims-paying ability.**

In this document, "you" and "your" refer to an individual participant or beneficiary.

Part I. Performance Information. The contract is an investment option that has a fixed rate of return. The table below contains information about the rate of return, the term or length of time you will earn that rate, and other information relevant to performance.

Name / Type of Option	TSA I is an individual deferred fixed annuity contract.
Return	See explanation in "Other" below.
Term	N/A
Other	The annuity value and surrender value of the contract are each credited with interest. MMALIC may change this interest rate at any time. The interest rate may not be lower than the guaranteed minimum interest rate of 4.00%. The interest rate on January 2, 2023, was equal to the guaranteed minimum interest rate.
Additional Information	Information about current interest rates applicable to your contract is available at 1-800-854-3649.

Part II. Fee and Expense Information. The table below shows fee and expense information related to the contract. It also includes a summary of restrictions and limitations that apply to purchase payments and withdrawals.

Name / Type of Option	TSA I is an individual deferred fixed annuity contract.
Total Annual Operating Expenses	N/A
Shareholder-Type Fees See Part III for more information.	<u>Fees Charged Directly Against Your Investment</u> <ul style="list-style-type: none">MMALIC currently charges 7.5% interest on loans taken under the contract.
Restrictions	<u>Purchase Payments.</u> Purchase payments are subject to any minimum amounts that MMALIC may from time to time require. <u>Withdrawals.</u> Minimum of \$500; after a withdrawal, your remaining surrender value (if any) must be at least \$500. Purchase payments and withdrawals are subject to tax law and applicable employer plan restrictions.

The cumulative effect of fees and expenses can substantially reduce the growth of retirement savings. Visit the Department of Labor's Web site for an example showing the long-term effect of fees and expenses at <https://www.dol.gov/sites/default/files/ebsa/about-ebsa/our-activities/resource-center/publications/a-look-at-401k-plan-fees.pdf>.

Fees and expenses are only one of many factors to consider when deciding to invest in an option. You may also want to think about whether an investment in a particular option, along with your other investments, will help you to achieve your financial goals.

Part III. Annuity Information. This table contains a summary of certain features of the contract. For more information about these features, see your contract.

Name / Issuer	TSA I / MassMutual Ascend Life Insurance Company® (MMALIC)
Objective / Goal	The contract is a deferred annuity. It is designed to be a long-term investment, to meet retirement and other long-range goals. It is designed to provide stability of principal and guarantee a minimum rate of return.
Benefits	<p><u>Annuity Benefit.</u> The contract will provide a guaranteed stream of income to you at some future date. These payments will be based on your annuity value if an amount equal to at least 50% of all purchase payments that have been paid for the contract (excluding single sum transfers) is applied to payments: (1) for life; (2) over a period of at least 5 years. Otherwise, these payments will be based on your surrender value.</p> <p>The annuity benefit amount will be reduced by any applicable premium tax or other tax not previously deducted, and the outstanding balance of any loans.</p> <p><u>Contract Values.</u></p> <ul style="list-style-type: none"> • The <i>annuity value</i> of your contract at any time is equal to: (1) 100% of the purchase payments received by ALIC; minus (2) all withdrawals; plus (3) interest earned on the annuity value; and minus (4) premium tax or other taxes, if applicable. • The <i>surrender value</i> of your contract at any time is equal to: (1) 80% of first year purchase payments and 100% of other purchase payments and single sum transfers, minus (2) all withdrawals; plus (3) interest earned on the surrender value; and minus (4) premium tax or other taxes, if applicable. <p><u>Death Benefit.</u> The contract includes a death benefit payable to your beneficiary if you die before your annuity commencement date and before your contract is surrendered. The death benefit will be based on your annuity value as of the date of death. The death benefit amount will be reduced by any applicable premium tax or other tax not previously deducted; and the outstanding balance of any loans.</p> <p><u>Settlement Options.</u> The standard forms of settlement options are listed below.</p> <ul style="list-style-type: none"> • <i>Income for a Fixed Period:</i> MMALIC will make periodic payments for a fixed period. • <i>Life Annuity with Payments for at Least a Fixed Period:</i> MMALIC will make periodic payments until the death of the person on whose life payments are based. If selected, we guarantee that such payments shall continue for at least a minimum fixed period even if the person should die before the end of that fixed period. • <i>Joint and One-half Survivor Annuity:</i> MMALIC will make periodic payments until your death. Thereafter, we will make 1/2 of the periodic payment until the death of the joint annuitant that you select. <p>The contract provides other options. MMALIC may offer additional options from time to time. Periodic payments under a settlement option are affected by various factors, including the length of the payment period, your life expectancy, the life expectancy of the joint annuitant, and the frequency of the payment interval.</p>
Pricing Factors	<p>The interest rate credited to your contract takes into account the costs of providing benefits to you under your contract.</p> <p>The 1971 Individual Annuity Table for the sex of the payee, with interest at 4% per year, compounded annually, is used to compute all guaranteed settlement option factors, values, and benefits under the contract, except as otherwise provided by any unisex endorsement attached to the contract.</p>
Fees	<u>Interest on Loans.</u> If loans are available under your contract and you borrow money under the loan provisions, MMALIC will charge interest on the loan. MMALIC currently charges 7.5% interest on loans. MMALIC will charge a higher interest rate if the plan administrator directs MMALIC to do so.
Limitations	<p><u>Settlement Option Limitations.</u></p> <ul style="list-style-type: none"> • You may not change your annuity commencement date to a date that is later than the contract anniversary following your 95th birthday. • Payments under a settlement option are subject to any minimum amounts, payment intervals, and other terms and conditions that MMALIC may from time to time require. All elected settlement options must comply with pertinent laws and governmental regulations and rulings. <p><u>Other Policy Limitations.</u> Restrictions on purchase payments and withdrawals are summarized in Part II.</p>

