



::: MassMutual Ascend

MassMutual Ascend Life Insurance Company A.M. BEST: **A++**

Annuity Illustration

American Legend 7 MVA

Prepared for:
Valued Client



Calculation Assumptions

CLIENT INFORMATION	
Annuitant	Valued Client
Annuitant Age	65
Annuitant Gender	Male
Issue State	IN

PREMIUM	
Initial Premium	\$500,000
Tax Type	Traditional IRA
Annuity Bonus	None

LIFETIME INCOME RIDER	
Activation Age	65
Rider Fee	1.10%
Payment Type	Male

Strategy Allocations

100%	<p>1-Year S&P 500 PTP Cap</p> <p>\$100,000 - \$1,000,000 Reset: Annual Cap: 9.25% S&P 500, since 1957</p>
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Calculation Notes

- Illustrations of the Inheritance Enhancer rider may differ from carrier illustrations because MMAscend uses a different method to subtract the rider fee from the fixed strategy than from the indexed strategies.

Guaranteed Values

Here's how the annuity might look over time, from the current age until annuitization. The values show what would happen if the indexed allocations earn zero indexed interest and the fixed allocation earns the minimum guaranteed fixed rate in all years.

Contract Year	Age	Premium	Beginning Contract Value	Annual Withdrawals	Credited Interest Rate	Ending Benefit Base	Lifetime Withdrawal Rate	Available Lifetime Withdrawal	Rider Charge	Ending Contract Value	Guaranteed Minimum Value	Cash Surrender Value	Death Benefit
1	65-66	\$500,000	\$500,000	\$35,750	0%	\$500,000	—	\$35,750	\$5,500	\$458,750	\$412,250	\$418,745	\$458,750
2	66-67	\$0	\$458,750	\$35,750	0%	\$500,000	—	\$35,750	\$5,500	\$417,500	\$386,394	\$386,394	\$417,500
3	67-68	\$0	\$417,500	\$35,750	0%	\$500,000	—	\$35,750	\$5,500	\$376,250	\$359,917	\$359,917	\$376,250
4	68-69	\$0	\$376,250	\$35,750	0%	\$500,000	—	\$35,750	\$5,500	\$335,000	\$332,805	\$332,805	\$335,000
5	69-70	\$0	\$335,000	\$35,750	0%	\$500,000	—	\$35,750	\$5,500	\$293,750	\$305,043	\$305,043	\$305,043
6	70-71	\$0	\$293,750	\$35,750	0%	\$500,000	—	\$35,750	\$5,500	\$252,500	\$276,614	\$276,614	\$276,614
7	71-72	\$0	\$252,500	\$35,750	0%	\$500,000	—	\$35,750	\$5,500	\$211,250	\$247,503	\$247,503	\$247,503
8	72-73	\$0	\$211,250	\$35,750	0%	\$500,000	—	\$35,750	\$5,500	\$170,000	\$217,693	\$217,693	\$217,693
9	73-74	\$0	\$170,000	\$35,750	0%	\$500,000	—	\$35,750	\$5,500	\$128,750	\$187,167	\$187,167	\$187,167
10	74-75	\$0	\$128,750	\$35,750	0%	\$500,000	—	\$35,750	\$5,500	\$87,500	\$155,909	\$155,909	\$155,909
11	75-76	\$0	\$87,500	\$35,750	0%	\$500,000	—	\$35,750	\$5,500	\$46,250	\$123,901	\$123,901	\$123,901
12	76-77	\$0	\$46,250	\$35,750	0%	\$500,000	—	\$35,750	\$5,500	\$5,000	\$91,125	\$91,125	\$91,125
13	77-78	\$0	\$5,000	\$35,750	0%	\$500,000	—	\$35,750	\$0	\$0	\$57,562	\$57,562	\$57,562
14	78-79	\$0	\$0	\$35,750	0%	\$500,000	—	\$35,750	\$0	\$0	\$23,193	\$23,193	\$23,193
15	79-80	\$0	\$0	\$35,750	0%	\$500,000	—	\$35,750	\$0	\$0	\$0	\$0	\$0
16	80-81	\$0	\$0	\$35,750	0%	\$500,000	—	\$35,750	\$0	\$0	\$0	\$0	\$0
17	81-82	\$0	\$0	\$35,750	0%	\$500,000	—	\$35,750	\$0	\$0	\$0	\$0	\$0
18	82-83	\$0	\$0	\$35,750	0%	\$500,000	—	\$35,750	\$0	\$0	\$0	\$0	\$0
19	83-84	\$0	\$0	\$35,750	0%	\$500,000	—	\$35,750	\$0	\$0	\$0	\$0	\$0
20	84-85	\$0	\$0	\$35,750	0%	\$500,000	—	\$35,750	\$0	\$0	\$0	\$0	\$0
21	85-86	\$0	\$0	\$35,750	0%	\$500,000	—	\$35,750	\$0	\$0	\$0	\$0	\$0
22	86-87	\$0	\$0	\$35,750	0%	\$500,000	—	\$35,750	\$0	\$0	\$0	\$0	\$0
23	87-88	\$0	\$0	\$35,750	0%	\$500,000	—	\$35,750	\$0	\$0	\$0	\$0	\$0
24	88-89	\$0	\$0	\$35,750	0%	\$500,000	—	\$35,750	\$0	\$0	\$0	\$0	\$0
25	89-90	\$0	\$0	\$35,750	0%	\$500,000	—	\$35,750	\$0	\$0	\$0	\$0	\$0
26	90-91	\$0	\$0	\$35,750	0%	\$500,000	—	\$35,750	\$0	\$0	\$0	\$0	\$0
27	91-92	\$0	\$0	\$35,750	0%	\$500,000	—	\$35,750	\$0	\$0	\$0	\$0	\$0
28	92-93	\$0	\$0	\$35,750	0%	\$500,000	—	\$35,750	\$0	\$0	\$0	\$0	\$0
29	93-94	\$0	\$0	\$35,750	0%	\$500,000	—	\$35,750	\$0	\$0	\$0	\$0	\$0
30	94-95	\$0	\$0	\$35,750	0%	\$500,000	—	\$35,750	\$0	\$0	\$0	\$0	\$0
31	95-96	\$0	\$0	\$35,750	0%	\$500,000	—	\$35,750	\$0	\$0	\$0	\$0	\$0

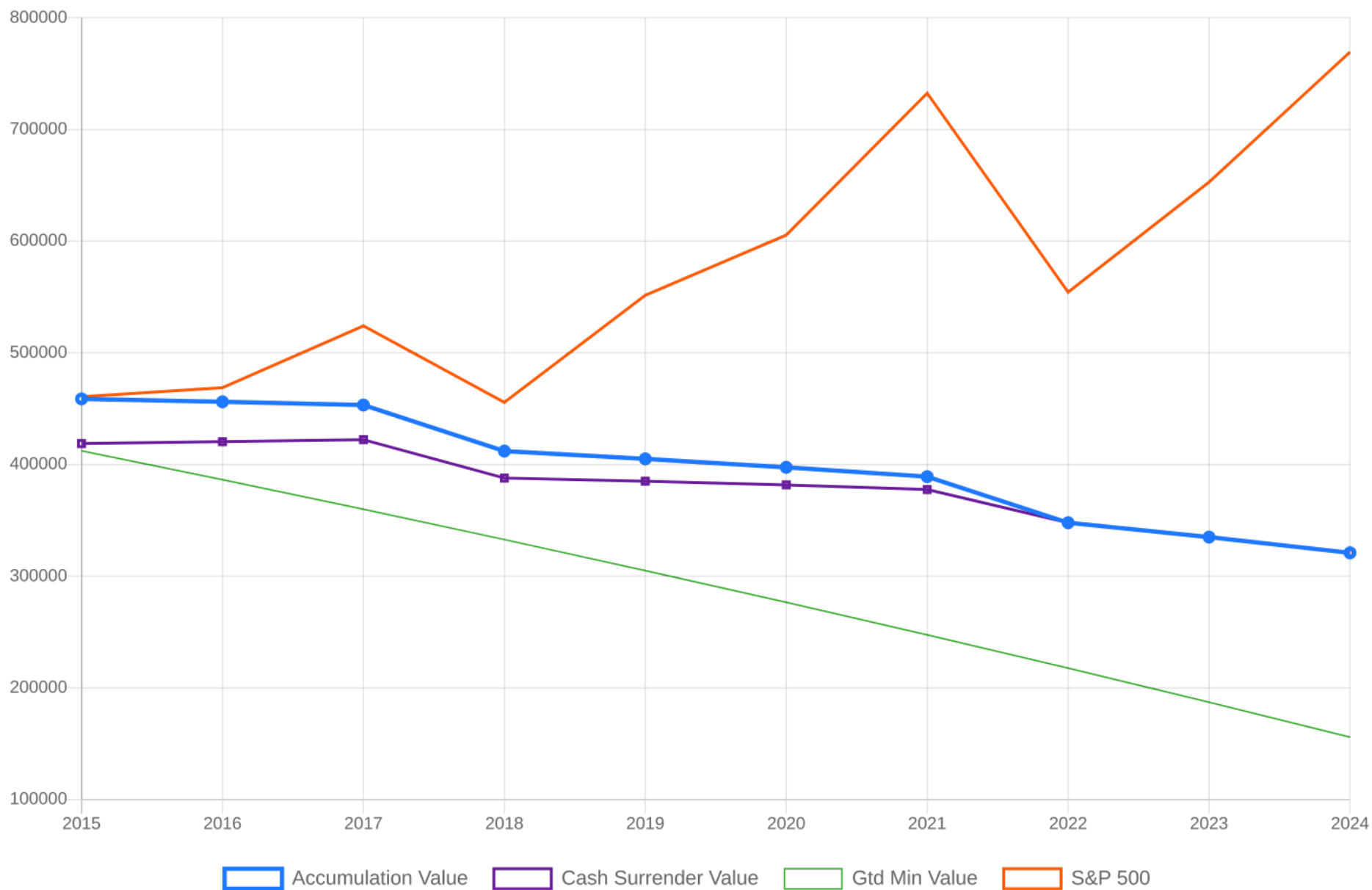
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Hypothetical Values (Current Rates)

Here's how the annuity might look over time, from the current age until annuitization. The values show what would happen if the allocations earned interest using current rates in all years. The indexed interest is based on actual index performance during the most recent 10-calendar year period for the first 10 years. We repeat the index performance from this 10-year period afterward.

Contract Year	Age	Premium	Beginning Contract Value	Annual Withdrawals	Credited Interest Rate	Ending Benefit Base	Lifetime Withdrawal Rate	Available Lifetime Withdrawal	Rider Charge	Ending Contract Value	Guaranteed Minimum Value	Cash Surrender Value	Death Benefit
1	65-66	\$500,000	\$500,000	\$35,750	0%	\$500,000	—	\$35,750	\$5,500	\$458,750	\$412,250	\$418,745	\$458,750
2	66-67	\$0	\$458,750	\$35,750	9.25%	\$500,000	—	\$35,750	\$5,500	\$456,119	\$386,394	\$420,439	\$456,119
3	67-68	\$0	\$456,119	\$35,750	9.25%	\$500,000	—	\$35,750	\$5,500	\$453,244	\$359,917	\$422,207	\$453,244
4	68-69	\$0	\$453,244	\$35,750	0%	\$500,000	—	\$35,750	\$5,500	\$411,994	\$332,805	\$387,849	\$411,994
5	69-70	\$0	\$411,994	\$35,750	9.25%	\$500,000	—	\$35,750	\$5,500	\$405,038	\$305,043	\$385,059	\$405,038
6	70-71	\$0	\$405,038	\$35,750	9.25%	\$500,000	—	\$35,750	\$5,500	\$397,438	\$276,614	\$381,731	\$397,438
7	71-72	\$0	\$397,438	\$35,750	9.25%	\$500,000	—	\$35,750	\$5,500	\$389,136	\$247,503	\$377,581	\$389,136
8	72-73	\$0	\$389,136	\$35,750	0%	\$500,000	—	\$35,750	\$5,500	\$347,886	\$217,693	\$347,886	\$347,886
9	73-74	\$0	\$347,886	\$35,750	9.25%	\$500,000	—	\$35,750	\$5,500	\$335,000	\$187,167	\$335,000	\$335,000
10	74-75	\$0	\$335,000	\$35,750	9.25%	\$500,000	—	\$35,750	\$5,500	\$320,921	\$155,909	\$320,921	\$320,921
11	75-76	\$0	\$320,921	\$35,750	0%	\$500,000	—	\$35,750	\$5,500	\$279,671	\$123,901	\$279,671	\$279,671
12	76-77	\$0	\$279,671	\$35,750	9.25%	\$500,000	—	\$35,750	\$5,500	\$260,475	\$91,125	\$260,475	\$260,475
13	77-78	\$0	\$260,475	\$35,750	9.25%	\$500,000	—	\$35,750	\$5,500	\$239,504	\$57,562	\$239,504	\$239,504
14	78-79	\$0	\$239,504	\$35,750	0%	\$500,000	—	\$35,750	\$5,500	\$198,254	\$23,193	\$198,254	\$198,254
15	79-80	\$0	\$198,254	\$35,750	9.25%	\$500,000	—	\$35,750	\$5,500	\$171,527	\$0	\$171,527	\$171,527
16	80-81	\$0	\$171,527	\$35,750	9.25%	\$500,000	—	\$35,750	\$5,500	\$142,327	\$0	\$142,327	\$142,327
17	81-82	\$0	\$142,327	\$35,750	9.25%	\$500,000	—	\$35,750	\$5,500	\$110,427	\$0	\$110,427	\$110,427
18	82-83	\$0	\$110,427	\$35,750	0%	\$500,000	—	\$35,750	\$5,500	\$69,177	\$0	\$69,177	\$69,177
19	83-84	\$0	\$69,177	\$35,750	9.25%	\$500,000	—	\$35,750	\$5,500	\$30,510	\$0	\$30,510	\$30,510
20	84-85	\$0	\$30,510	\$35,750	9.25%	\$500,000	—	\$35,750	\$0	\$0	\$0	\$0	\$0
21	85-86	\$0	\$0	\$35,750	0%	\$500,000	—	\$35,750	\$0	\$0	\$0	\$0	\$0
22	86-87	\$0	\$0	\$35,750	9.25%	\$500,000	—	\$35,750	\$0	\$0	\$0	\$0	\$0
23	87-88	\$0	\$0	\$35,750	9.25%	\$500,000	—	\$35,750	\$0	\$0	\$0	\$0	\$0
24	88-89	\$0	\$0	\$35,750	0%	\$500,000	—	\$35,750	\$0	\$0	\$0	\$0	\$0
25	89-90	\$0	\$0	\$35,750	9.25%	\$500,000	—	\$35,750	\$0	\$0	\$0	\$0	\$0
26	90-91	\$0	\$0	\$35,750	9.25%	\$500,000	—	\$35,750	\$0	\$0	\$0	\$0	\$0
27	91-92	\$0	\$0	\$35,750	9.25%	\$500,000	—	\$35,750	\$0	\$0	\$0	\$0	\$0
28	92-93	\$0	\$0	\$35,750	0%	\$500,000	—	\$35,750	\$0	\$0	\$0	\$0	\$0
29	93-94	\$0	\$0	\$35,750	9.25%	\$500,000	—	\$35,750	\$0	\$0	\$0	\$0	\$0
30	94-95	\$0	\$0	\$35,750	9.25%	\$500,000	—	\$35,750	\$0	\$0	\$0	\$0	\$0
31	95-96	\$0	\$0	\$35,750	0%	\$500,000	—	\$35,750	\$0	\$0	\$0	\$0	\$0
Cumulative withdrawals				\$1,108,250	6.39%	Annual effective rate of return							

HYPOTHETICAL COMPARISON AGAINST S&P 500® INDEX



American Legend 7 MVA Details

American Legend 7 - fixed-indexed annuity offers multiple indexed strategies, accepts additional purchase payments, and features early withdrawal charges and market value adjustments that end after seven years.

For more information about submitting New Business applications, please contact the MassMutual Ascend sales desk directly at 1-888-504-7109 option 2

Purchase payments

You can purchase this annuity with an initial purchase payment of \$10,000 or more. You can add to your annuity at any time with additional purchase payments of at least \$2,000. MassMutual Ascend only allows additional premiums to be added as a Lump Sum, Periodic Payments are not allowed.

Issue ages

Qualified: 0-85

Non-qualified: 0-85

Inherited IRA: 0-75

Inherited non-qualified: 0-75

Market Value Adjustment (MVA)

A market value adjustment will apply to withdrawals or surrenders during the seven-year term. An MVA does not apply in all states. Refer to the Interest Rate or State Approval Charts for non-MVA states.

Death benefit

The greater of the account value or GMSV will be paid upon the death of the owner. A spouse who is the surviving joint owner or sole surviving beneficiary may become the successor owner.

Annuitization

The following options are available following the first contract year: fixed period payout, life payout or life payout with payments for at least a fixed period, and joint and one-half survivor payout.

Free Withdrawals

During the first contract year, 10% of the purchase payments may be withdrawn without an early withdrawal charge. After the first contract year, 10% of the sum of the account value on the most recent contract anniversary, plus any purchase payments received since, may be withdrawn without an early withdrawal charge. The sum of all previous withdrawals during the same contract year will be subtracted to determine the amount available. This free withdrawal allowance is not cumulative, and unused amounts do not carry over to the next contract year.

Loan Provision

A loan endorsement is available for 403(b) and 457(b) contracts. Loans are subject to terms of the loan application and agreement (TSAL2798). Minimum loan amount: \$1,000; Minimum surrender value balance that must remain following a loan: \$500 plus amounts held to secure all outstanding loans on the contract.

Not available in: AK, GU, HI, NY, PA, PR, UT, VI

Variation Applies For	GMSV	GMSV Interest	MVA
Most States	87.5 %	2.4 %	With MVA

Variation Applies For	GMCSV	GMCSV Interest	MVA
CA	—	—	Without MVA
NJ	90 %	—	—
WA	—	2.45 %	—

Surrender Charge Schedule

Years measured from premium payment:	1 yr	2 yr	3 yr	4 yr	5 yr	6 yr	7 yr
Surrender charge:	9%	8%	7%	6%	5%	4%	3%

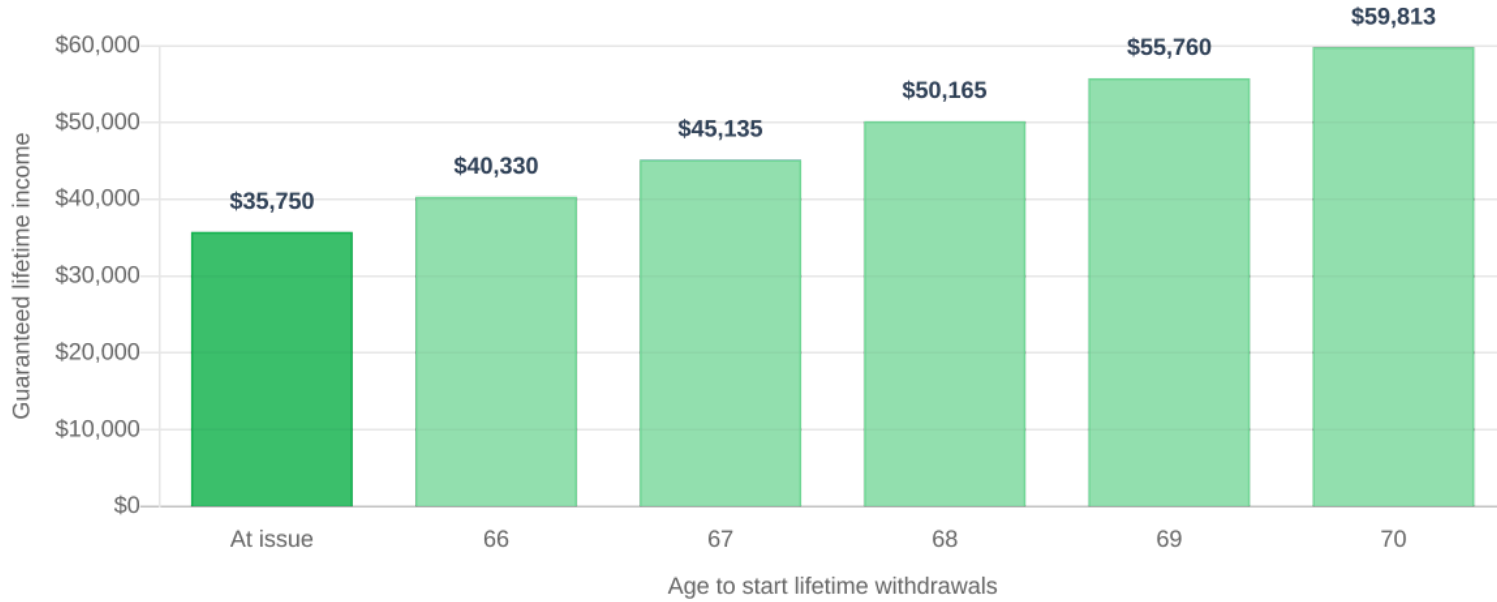
Income Ascender Rider

Simple roll-up rate 9%	Rollup period 10 years up to 250% of Premium	Fee from benefit base 1.10% annually (2.50% max)
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The optional guaranteed income rider, featuring:

- **Issue ages.** 40-85 (Income payments may begin at age 55.)
- **Income payments.** If the client is 55 years old or older, income payments may be taken at any time through withdrawals based on the benefit base and the income option that was selected. There are two ways to receive income: Single lifetime income and Joint lifetime income. If the joint lifetime income is selected, the owner and spouse must be at least age 55 on the income start date.
- **Rider charge.** An annual charge of 1.10% of the benefit base will be taken at the end of each contract year.
- On any contract anniversary before you begin lifetime withdrawals, you may elect to reset your income base to your account value, if higher. After that Rider charge rate is 2.50%.

Guaranteed Lifetime Income Based on Start Year



Beginning of year	Age	Benefit Base	Withdrawal Percentage	Guaranteed Annual Income	Income/Premium Ratio
At issue	65	\$500,000	7.15%	\$35,750	7.15%
2	66	\$545,000	7.40%	\$40,330	8.07%
3	67	\$590,000	7.65%	\$45,135	9.03%
4	68	\$635,000	7.90%	\$50,165	10.03%
5	69	\$680,000	8.20%	\$55,760	11.15%
6	70	\$725,000	8.25%	\$59,813	11.96%

1-Year S&P 500 PTP Cap

Allocation: 100% Inception date: 03/04/1957

Here's how the annuity might have looked over 3 different 10-year periods. The values show what would happen if the stated index earned indexed interest using current rates for the periods indicated. Annualized Credited Rate does not reflect any rider or contract charges.

HIGH PERIOD

Annualized credited rate: 7.33%

Anniversary Date	End of Year Credited Interest Rate	End of Year Accumulation Value
12/31/2012	9.25%	\$540,241
12/31/2013	9.25%	\$584,205
12/31/2014	9.25%	\$632,235
12/31/2015	0.00%	\$626,735
12/31/2016	9.25%	\$678,699
12/31/2017	9.25%	\$735,470
12/31/2018	0.00%	\$729,970
12/31/2019	9.25%	\$791,484
12/31/2020	9.25%	\$858,687
12/31/2021	9.25%	\$932,107

LOW PERIOD

Annualized credited rate: 5.82%

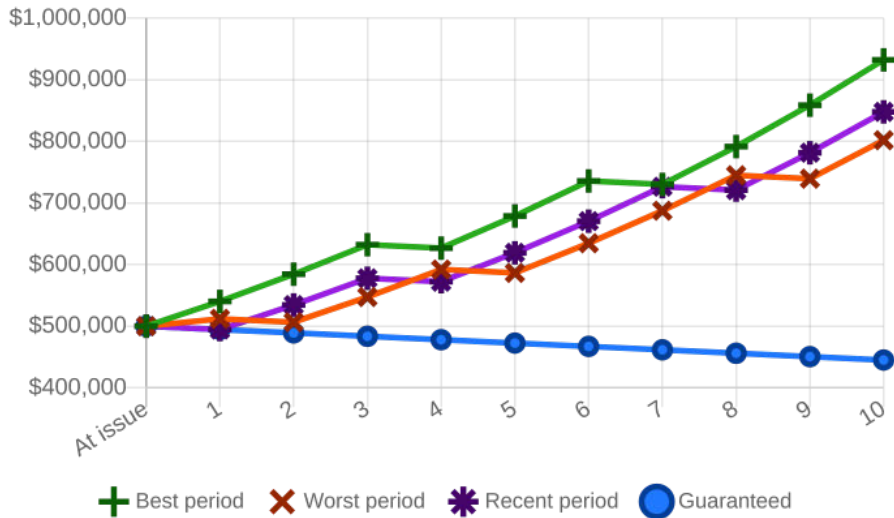
Anniversary Date	End of Year Credited Interest Rate	End of Year Accumulation Value
12/31/2007	3.52%	\$511,906
12/31/2008	0.00%	\$506,406
12/31/2009	9.25%	\$547,240
12/31/2010	9.25%	\$591,851
12/31/2011	0.00%	\$586,351
12/31/2012	9.25%	\$634,580
12/31/2013	9.25%	\$687,270
12/31/2014	9.25%	\$744,834
12/31/2015	0.00%	\$739,334
12/31/2016	9.25%	\$801,713

MOST RECENT PERIOD

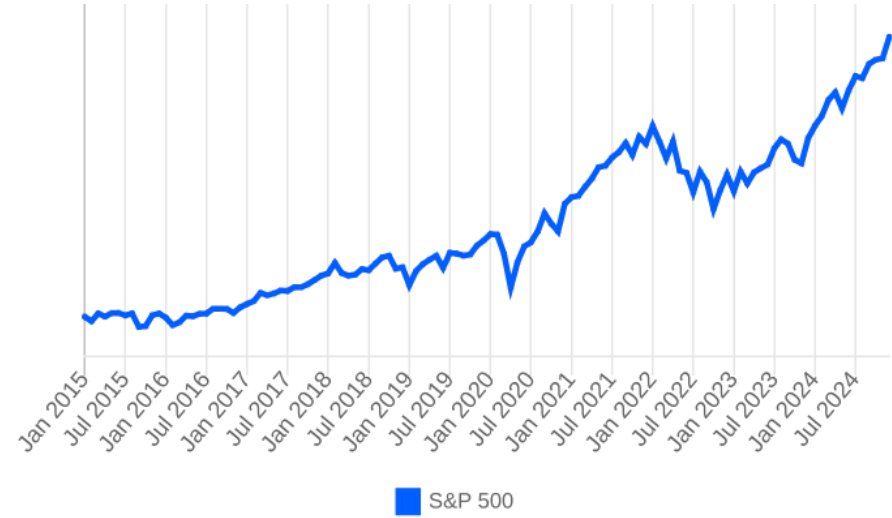
Annualized credited rate: 6.39%

Anniversary Date	End of Year Credited Interest Rate	End of Year Accumulation Value
12/31/2015	0.00%	\$494,500
12/31/2016	9.25%	\$534,233
12/31/2017	9.25%	\$577,640
12/31/2018	0.00%	\$572,140
12/31/2019	9.25%	\$619,054
12/31/2020	9.25%	\$670,308
12/31/2021	9.25%	\$726,303
12/31/2022	0.00%	\$720,803
12/31/2023	9.25%	\$781,469
12/31/2024	9.25%	\$847,746

Graphical Presentation of Historical Periods



Historical Index Performance



This supplemental report is not valid unless accompanied by a complete product illustration and/or disclosure document from the respective insurer.

Data and Assumptions

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The hypothetical retirement income values are not guaranteed unless otherwise stated and are subject to change by the insurer, and assume the product is held for the time period reflected. The hypothetical values in this report may not reflect the deduction of any (or any applicable) fees and charges, including surrender charges, or income taxes inherent to insurance products. If any fees, charges, or income taxes were included, the values shown would be reduced. The information contained in this report is not representative of the actual or future performance of any specific product. Your actual results may be higher or lower and will vary due to a number of factors, including, but not limited to, the specific product selected, purchase date, market conditions, changes in interest rates, assumed interest credits, product fees and charges, investment advisory fees, additional riders, income taxes, and inflation.

Although an external index may affect your interest credited, the FIA does not directly participate in any equity or fixed income investments. The index value does not include the dividends paid on the equity investments underlying any equity index or the interest paid on the fixed income investments underlying any bond index. These dividends and interest are not reflected in the interest credited to your FIA. No one index performs best in every situation.

Product features, limitations, fees and availability may vary by state.

Annuity and insurance product rates, guarantees and death benefits are based on the financial strength and claims-paying ability of the issuing company.

Early withdrawals or surrender of the annuity can result in a withdrawal or surrender charge and will be subject to ordinary income taxes. In some instances, annuities may be subject to a market value adjustment. In addition to being taxed as ordinary income, if withdrawals are taken prior to age 59 1/2, they can also be subject to a 10% federal early withdrawal tax.

Bonus annuities may include higher surrender charges, longer surrender periods, lower caps, higher spreads, or other restrictions that are not included in similar annuities that don't offer a bonus feature.

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