.:. MassMutual Ascend Life Insurance Company



Protection options for a variety of market scenarios

With an Index Frontier Pro registered index-linked annuity



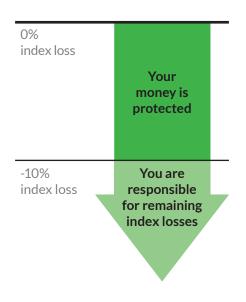
As you prepare for retirement, you may find yourself seeking a balance of growth and protection. An Index Frontier® Pro annuity offers indexed strategies that let you take advantage of positive market performance while providing a level of protection against market downturns. When index performance is positive during a term, strategies earn a return, up to a cap. When index performance is negative during a term, strategies may lose value, limited by either a buffer or a floor.

Cap: Any gain during a term for any strategy is subject to an upper limit called the cap or maximum gain. Before the end of a term, it is also limited by a vesting factor. The vesting factor varies depending on the day of the term. It is 25% for the first half of a term, 50% for the second half of a term, and 100% at the end of a term.

The Index Frontier 5 Pro has a 5-year early withdrawal charge schedule and a contract fee deducted from each strategy on a daily basis that compounds to an effective annual rate of 0.50%.

The Index Frontier 7 Pro has a 7-year early withdrawal charge schedule and a contract fee deducted from each strategy on a daily basis that compounds to an effective annual rate of 1.00%.

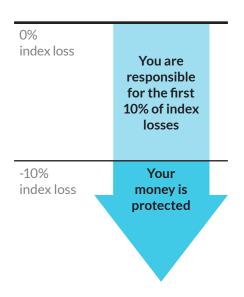
10% BUFFER STRATEGY



- Protects against the first 10% of index losses
- May be a fit if you're seeking protection against minor market downturns, which are more common during bull market cycles

Buffer: The buffer protects against the first 10% of losses at the end of each term of a buffer strategy. The buffer varies depending on the day of the term. The buffer at the end of a term is 10%. Before the end of the term, the buffer is calculated daily as a prorated share of the annual 10% buffer.

-10% FLOOR STRATEGY



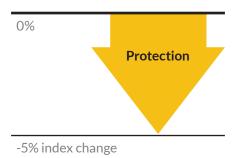
- Protects against index losses in excess of -10%
- May be a fit if you're seeking protection against major market downturns, which are more common during bear market cycles

 $\textbf{Floor:} \ \, \text{Any loss during a term for a growth strategy is subject to a lower limit called the floor or maximum loss.}$

Strategies In Action: Bull Market

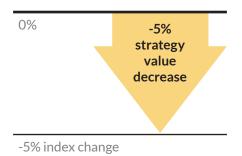
Let's take a look at how each strategy would have performed in the event of a -5% index change at the end of a term during a bull market.

10% BUFFER STRATEGY



Because the 10% buffer strategy protects against the first 10% of index losses, a -5% index change would not result in a strategy value decrease.

-10% FLOOR STRATEGY

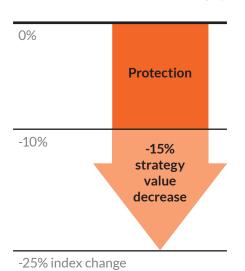


Because the -10% floor strategy only protects against index losses in excess of -10%, a -5% index change would result in a -5% strategy value decrease.

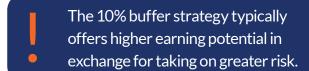
Strategies In Action: Bear Market

Let's take a look at how each strategy would have performed in the event of a -25% index change at the end of a term during a bear market.

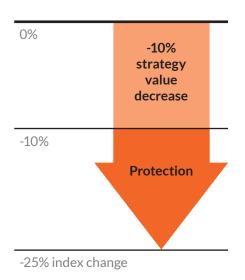
10% BUFFER STRATEGY



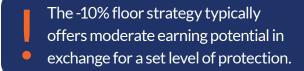
Because the 10% buffer strategy protects against the first 10% of index losses, a -25% index change would result in a -15% strategy value decrease.

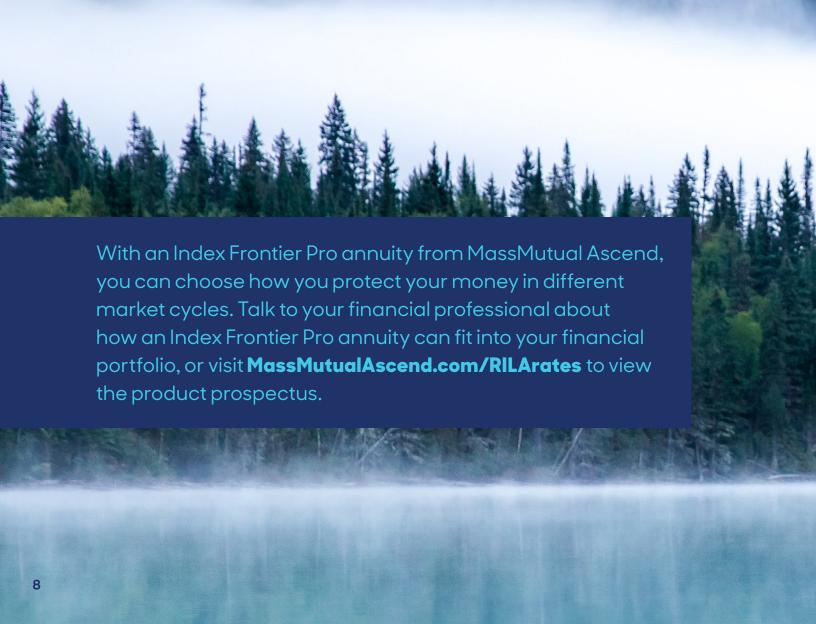


-10% FLOOR STRATEGY



Because the -10% floor strategy protects against index losses in excess of -10%, a -25% index change would only result in a -10% strategy value decrease.







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.

MassMutual Ascend's registered index-linked annuities can only be sold through a Broker/Dealer that is contracted with MassMutual Ascend Any sales solicitation must be accompanied or preceded by a prospectus. To obtain a copy of the prospectus, please visit MassMutualAscend.com/RILArates. In the Index Frontier Pro contract and prospectus, a cap is referred to as a maximum gain, and a floor is referred to as a maximum loss. The Index Frontier Pro product prospectus contains more information about caps, floors, buffers and other features of this annuity. Please read it carefully before you invest.

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

Product issued by MassMutual Ascend Life Insurance Company (Cincinnati, Ohio), a wholly owned subsidiary of Massachusetts Mutual Life Insurance Company (MassMutual), under contract forms P1833421NW, P1833421ID, P1833521NW and P1833521ID. Form numbers, product features and availability may vary by state.

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

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