... MassMutual



Index Horizons

Fixed Index Annuity Issued by C.M. Life Insurance Company



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The retirement horizon







Having retirement on the horizon is an exciting time...

...full of promise and a renewed focus on the things and people you love. Because people are generally living longer and healthier lives, it is reasonable to expect this phase of life to last as many as 20 years or longer.



The freedom to fully enjoy this time will depend, at least somewhat, on how secure you feel about your finances.

Can you **protect** the assets you have accumulated thus far from market volatility, yet **preserve** the potential for growth — so that your assets may have a chance to keep up with inflation?

When and how should you convert your assets into income?

Having income that is predictable, reliable and guaranteed to last your entire life can help you **prepare** to make the most of what you find on the other side of the horizon.

What will you find on the other side?

While the future holds a lot of promise, there are a lot of potential risks to consider. For instance, have you saved enough to maintain your lifestyle? What effect might market volatility have on your savings? How can you be confident you won't outlive your money?

These are important questions to ask. While you may not be able to prevent all risks, you can prepare your retirement strategy by strengthening it to better support future goals.

A key step in that preparation is making sure part of your savings are secure from the unexpected. You may know that the sooner you need to use retirement assets, the more they should be protected from losing value. That means allocating more of your assets to products that are "fixed" or limit market risk.

While a large percentage of the money you will need to support your lifestyle over the next 10 years or so should be in conservative products focused on protecting its current value, the portion earmarked for decades down the road still needs the opportunity to grow. In anticipation of a long retirement, it is important to consider the effects of inflation on your savings. Unfortunately, the money you have today will not be worth as much 20, 10 or even 5 years from now. So, while you need security, you also want the opportunity for better growth than many fixed products offer.



A sound retirement solution is one that has:

Growth potential

One of the drawbacks of a long retirement is inflation. Take a look at how the expenses related to daily life have increased over the last 25 years. When you consider that your retirement may last a similar length of time, you can see how important it is that the assets you have now continue to grow. Growing your nest egg will improve your chances of being able to maintain your lifestyle over several decades.



Access

It would be unrealistic to anticipate needing the same amount of income each year after you retire. Whether it may be the trip of a lifetime or needing a new roof, life is unpredictable and, at times, expensive. Having some liquid assets readily available in savings or money market accounts can help keep the remainder of your plan on track.

Predictable income

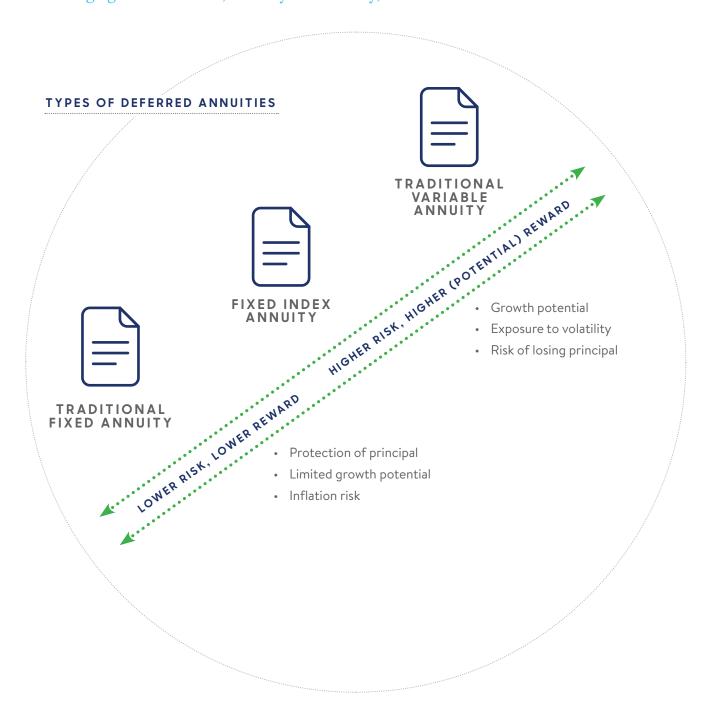
This is the foundation or "floor" of your retirement income plan. It's the income that isn't exposed to market ups and downs and is guaranteed to be there when you need it. There are three key sources for this type of income: Social Security, a defined benefit pension plan (if you are lucky enough to have one) and the lifetime income options provided by many annuities.

71.6% is the cumulative inflation rate for the 25-year period between January 1995 and January 2020.

¹ U.S. Bureau of Labor, CPI Inflation Calculator, https://www.bls.gov/data/inflation_calculator.htm

Deferred annuities have been a part of the solution for many families

Traditional deferred annuities offer unique features that may help your savings grow and then, when you're ready, create income for retirement.²



² This discussion is not inclusive of Deferred Income Annuities.

Each deferred annuity contract combines some or all of these important features and others in a distinctive way to present a retirement savings solution to individuals and families seeking to meet their specific retirement goals.

Growth opportunities	Traditional deferred annuities begin with an accumulation period when your purchase payments have the opportunity for growth. The investment choices and risk levels found may vary greatly – from variable annuities with many underlying investment choices to fixed annuities that offer steady, predictable growth.
Tax deferral	Annuities are generally tax-deferred which means your money grows free from current income taxes, ³ leaving a greater amount to benefit from compound interest.
Liquidity	Most contracts offer a free withdrawal amount each year during the accumulation phase. This amount is not subject to surrender charges, but the liquidated earnings are subject to income tax. ⁴ Once an annuity option has been chosen and payouts begin, withdrawals are generally not permitted.
Ability to provide income for life ⁵	Annuity options provide income for life, income for a specific number of years or a combination of both. The specific choices available may vary by contract. As a contract owner, you would select which one is right for you.
Death Benefit ⁶	Generally, if the owner dies during the accumulation phase of an annuity contract, the owner's beneficiary will receive a death benefit. If the owner's death occurs during the annuity payout phase, any death benefit payable would be based upon the annuity option chosen.
Guarantees	Most annuity contracts guarantee certain features. This may include one or more of the following: minimum interest rates, principal protection, income rates, death benefit or other contract features. Annuity product guarantees are based upon the claims-paying ability of the issuing company. Many issuers now offer guaranteed income riders, typically for an additional charge, that provide a structured income stream while preserving some access to the contract's value, if needed.

³ Tax deferral is automatically provided by tax-qualified retirement plans, including IRAs. There is no additional tax deferral provided when an annuity contract is used to fund a tax-qualified retirement plan or an IRA. Investors should only consider buying this contract to fund a tax-qualified retirement plan or an IRA for the annuity's insurance features, such as lifetime income payments and death benefit.

⁴ Taxes are paid on the earnings when withdrawn, and if made prior to age 59½, may be subject to an additional 10% federal income tax. Surrender charges may also apply to withdrawals other than free withdrawals.

⁵ For qualified contracts, upon the death of the owner (annuitant if the contract is held as a Custodial IRA), we may shorten the remaining payment period in order to ensure that payments do not continue beyond the 10 year post-death distribution period provided under IRC section 401(a)(9), or beyond the beneficiary's life or life expectancy for certain classes of beneficiaries, such as a spouse or an individual who is not more than 10 years younger than the decedent. In such a case, the adjusted payment stream will be calculated by first calculating the commuted value of the remaining payments, and then calculating an actuarially equivalent payment stream over the revised period, using the same rate used in the commutation calculation.

⁶ For qualified contracts, including custodial IRAs and Roth IRAs, we may be required to commute all or a portion of any remaining payments in order to comply with required minimum distribution rules that apply after an Owner's death.



Index Horizons

A Deferred Fixed Index Annuity with Growth or Income Potential

Index Horizons is a single premium deferred fixed annuity contract designed for its growth potential with index-linked interest options and a market value adjustment feature. Index Horizons offers a Guaranteed Lifetime Withdrawal Benefit rider (GLWB) for an additional charge for those whose focus is predictable income. The GLWB must be elected at the time the contract is issued. It cannot be added later.

- **Single premium** This annuity can only be funded with a single purchase payment. If multiple payments are identified on the application, the contract will be issued once all identified payments have been received, or in 60 calendar days following our receipt of all necessary paperwork in good order, whichever occurs first. Interest will not be credited on payments held between the dates the payments are received and the date the contract is issued.
- Index-linked interest The amount credited, if any, to an index account based on the index-linked interest method.

Index Horizons is an insurance contract. While external indices may affect contract values, this insurance contract is not a security, and does not participate directly in any stock, bond or equity investments. You are not buying shares of any stock and an investment cannot be made directly into an external index.

A choice of accounts

Index accounts and a fixed account

Index Horizons offers a choice of **3 index accounts** and a **fixed account**. You can allocate your contract value amongst one or all of these accounts within your annuity:

Index accounts

Each index account is credited with index-linked interest, if any, only at the end of an index term, based in part on the performance of an external index.

- Index-linked interest may not exceed the cap rate in place for that index term.
- We will declare new cap rates in advance for each index account and index term based upon our expectation of future economic conditions. Please ask your financial professional for our current rates.
- Each index term = 1 year. The initial term begins on the contract issue date and ends on the first contract anniversary.
 Subsequent index account terms begin and end on a contract anniversary.
- We guarantee the cap rate will never be less than 1% during the first 7 contract years and will never be less than 0.5% thereafter.

Fixed account

The fixed account is credited a current rate of interest on a daily basis.

- We will declare a new fixed interest rate for each fixed interest term.
 Subsequent fixed account rates may be higher or lower than the initial ones and may be different from those used with new contracts.
- Each fixed interest term = 1 year. The initial fixed interest term begins on the contract issue date and ends on the first contract anniversary. Subsequent fixed interest terms begin on a contract anniversary.
- The Minimum Guaranteed Interest Rate (MGIR) for the fixed account is declared for the life of the contract.

Transfer between accounts:

You can request transfers among the index accounts and fixed account at any time prior to the anniversary date and up to 21 calendar days following the anniversary date for which the transfer is made. The effective date of any transfer will be the contract anniversary date.

- **Index account** An account which may be elected by an owner during the accumulation period, with index-linked interest, if any, to be credited at the end of the index term, based in part on the performance of a corresponding external index.
- Index term The period used to measure the change in the external index values for each index account.

3 different index accounts

Index Account Name	Corresponding External Index & Description
S&P 500® 1 Year Point-to-Point with Cap	S&P 500® The Index includes large cap stocks from leading companies in leading industries of the U.S. economy. The S&P 500 is generally regarded as the benchmark for broad U.S. stock market performance.
MSCI EAFE® 1 Year Point-to-Point with Cap	MSCI EAFE® The index is designed to represent the performance of large and mid-cap securities across 21 developed markets, including countries in Europe, Australasia and the Far East, excluding the U.S. and Canada. The index is available for a number of regions, market segment/sizes and covers approximately 85% of the free float-adjusted market capitalization in each of the 21 countries. The Index is widely used as a benchmark and as the basis for index-linked financial products.
S&P 500® Low Volatility Price Return Daily Risk Control 5% 1 Year Point-to-Point with Cap	S&P 500® Low Volatility Price Return Daily Risk Control 5% Risk control indices provide exposure to the same constituents as the named index while targeting volatility/risk at a predetermined level. The volatility target is a predefined constant number set according to the level of risk appetite, and typically ranges from 5% (low risk) up to the long-term volatility of the underlying index.

Is the S&P 500[®] Low Volatility Price Return Daily Risk Control 5% 1 Year Point-to-Point with Cap Index Account (Low Volatility Index Account) right for you?

- The Low Volatility Index Account is credited with index-linked interest, if any, based, in part, on changes in the performance of the S&P 500® Low Volatility Price Return Daily Risk Control 5% Index.
- The S&P 500® Low Volatility Price Return Daily Risk Control 5% Index will not have the same performance as the S&P 500® Index. It is likely to have lower, but more stable performance.
- The cap rate available with the Low Volatility Index Account will typically be higher than the
 cap rates available with the other Index Horizons index accounts. However, performance of
 the S&P 500® Low Volatility Price Return Daily Risk Control 5% Index for a given index term
 may often be less than the Low Volatility Index Account cap rate.*
- **External index** The specified index corresponding to an index account that is used to determine index-linked interest. At no time will there be any actual investment in an external index.
- Cap rate The maximum interest rate that may be credited to an index account at the end of an index term.
- 1 Year Point-to-Point crediting method The method used to determine the index-linked interest that will be credited to an index account.

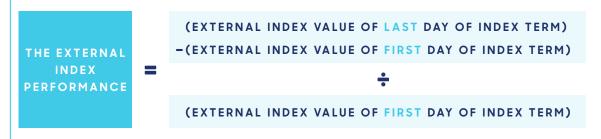
Interest crediting

During the accumulation period, your contract value is the total of the index account value(s) plus the fixed account value.



Steps we take to determine index-linked interest

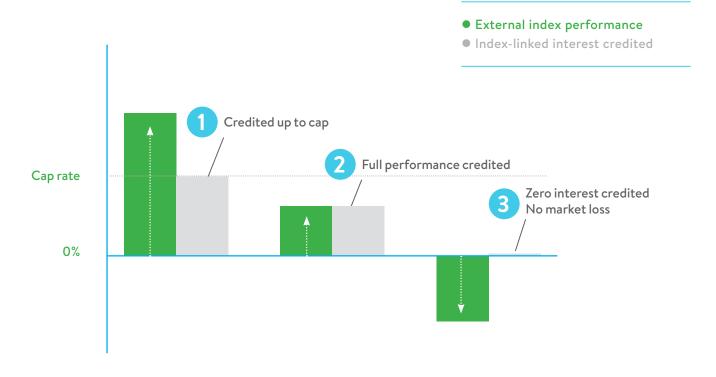
1 We calculate the performance of the external index during the index term.



- 2 If the external index performance is **greater than zero**, the index-linked interest rate will equal the external index performance rate or the cap rate, whichever is less. If the external index performance is less than or equal to zero, the index-linked interest rate will equal zero.
- The index-linked interest to be applied =

 (The index-linked interest rate) x (the index account value on the last day of index term)

External index performance scenarios



Your purchase payment and interest earned in previous years are completely protected from market losses.



Putting it all together

A hypothetical example of how index-linked interest is credited

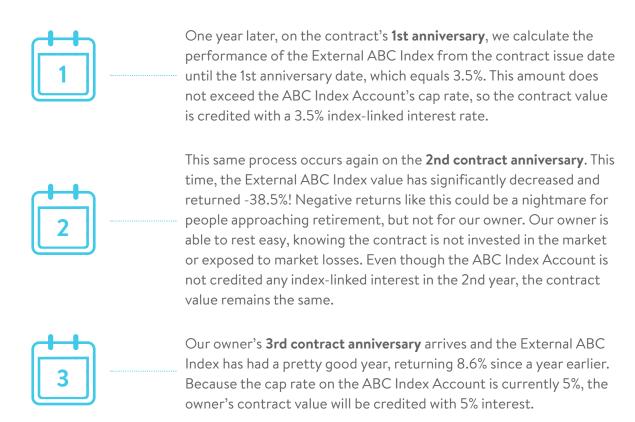
Assumptions:

- \$100,000 Purchase Payment
- Allocation = 100% ABC Index Account
- ABC Index Account Cap Rate = 5%
 (Does not change over period shown, actual Index Horizons cap rates may change annually.)
- · No withdrawals are taken from the annuity
- · GLWB is not elected

- Contract Value
- External ABC Index Value



In this example, our owner purchases an Index Horizons fixed index annuity with \$100,000 and allocates the entire purchase payment to the ABC Index Account. On the date the contract is issued, the value of External ABC Index is \$1,400.



This process will continue each contract anniversary as long as there is value in the ABC Index Account.

Hypothetical example. For illustrative purposes only.

Important details

This is a high level overview of Index Horizons' features, benefits and fees. For a detailed description of the product's specifics, please refer to the Index Horizons Product Disclosure. Ask your financial professional to provide you with a copy.

Overview of Index Horizons			
Issue ages	For all owners, annuitants and covered persons. We define issue age as "attained age" as applicable due to his/her last birthdate.		
	Non-qualified Without GLWB 18-85* With GLWB 53-80		
	Qualified Without GLWB 18-75 With GLWB 53-75		
No annual fee	There are no annual contract or administration fees, unless you elect the optional GLWB rider.		
Access to contract value	You may make full or partial withdrawals from the contract value before the annuity date. Before withdrawing your contract value, please be sure to understand the potential impact to your Index Horizons contract.		
	Please see Access to Contract Value Withdrawals on the next page.		



Please keep your contract anniversary date in mind, as it is same date your index term will end, and the day that any index-linked interest for the contract year will be credited to your index account(s). Amounts withdrawn from an index account before the end of the index term will not be credited index-linked interest for that term.

^{*}The minimum issue age in AL, DE and NE is 19. The minimum issue age in MS is 21. The maximum issue age may vary by distributor.

Access to contra	ct value withdrawals
Partial withdrawals	May be subject to surrender charges and market value adjustments if the withdrawal exceeds the free withdrawal amount. In addition, for contracts with the GLWB, amounts withdrawn may negatively affect the rider's future income.
Full withdrawals	A full withdrawal of the contract value will terminate the contract, unless the GLWB has been elected and the withdrawal is not an excess withdrawal. We guarantee that the contract withdrawal value at the time of a full withdrawal will not be less than the guaranteed minimum surrender value (GMSV).
Surrender charges	Shown as a percent of the amount withdrawn. Number of complete years from contract issue 0 1 2 3 4 5 6 7 years from contract issue 8% 8% 7% 6% 5% 4% 0% *For CA Contracts 8% 8% 7% 6% 5% 4% 3% 0%
Free withdrawal amount	Each contract year, you may withdraw a portion of your contract value free from any surrender charge. The free withdrawal amount in the first contract year is equal to 10% of the purchase payment, less the total free withdrawal amount previously withdrawn in that contract year. The free withdrawal amount in subsequent contract years is equal to 10% of the contract value as of the first day of the contract year in which the withdrawal is taken, less the total free withdrawal amount previously withdrawn in the same contract year. Unused free withdrawal amounts cannot be carried over.
Market Value Adjustment (MVA) *Not Applicable for CA contracts.	An MVA may apply to withdrawals that are subject to a surrender charge. The MVA is a positive or negative adjustment based on the change in the Constant Maturity Treasury rates from the contract's issue date to the withdrawal date. Typically, if those rates increase between the time of purchase and withdrawal, the MVA will likely decrease the amount you receive. Conversely, if rates have decreased over that time, the MVA will likely increase the amount you receive. The MVA will not adjust a full withdrawal of the contract value below the GMSV. However, there is no limit on the MVA for partial withdrawals, and partial withdrawals will reduce the GMSV by the net amount payable.
Terminal Illness Benefit Rider	This benefit will allow the owner to withdraw some or all of their contract value without incurring a surrender charge and MVA, if diagnosed with a terminal illness or terminal condition resulting from bodily injury and/or disease.
The Nursing Home and Hospital Withdrawal Benefit Rider *Not Available in CA.	This benefit will allow the owner to withdraw some or all of their contract value without incurring a surrender charge and MVA, if confined to a nursing home.

• Excess withdrawal – Under the GLWB rider, an excess withdrawal is the portion of a withdrawal that causes the cumulative amount withdrawn to exceed the annual benefit payment in that contract year, as well as any additional withdrawals taken for the remainder of the contract year.

Alternatives for income you cannot outlive

Any of these alternatives can help you secure a pension-like stream of predictable income that can supplement Social Security and pension benefits.

Annuity options⁸: Available as part of your annuity contract (at no additional charge) if you want to convert your contract value into a stream of income that you can never outlive. The greater of the contract value or GMSV will be applied to the annuity option you elect. You may generally elect to begin annuity payments at any time between the contract's 5th anniversary (unless an earlier date is required by state law) and when you reach age 95.

Guaranteed Lifetime Withdrawal Benefit (GLWB): A rider available for an additional charge on Index Horizons that provides annual income. If elected, this rider shifts the contract's priority to meeting predictable income goals.

The GLWB on Index Horizons is only available when the contract is issued. It cannot be elected later like the annuity options, so it is important to consider your future income needs prior to making a decision.

For more information on the GLWB, please see our accompanying rider guide: Flexibility, Income and Access – Electing the Guaranteed Lifetime Withdrawal Benefit on Your Index Horizons Annuity (AN4402), and the Index Horizons Disclosure Document.

Death benefit:

In the event the owner dies, the beneficiary will receive the contract value or the GMSV, whichever is greater. If the owner's death occurs during the annuity period, any remaining payments will be based on the annuity option chosen. For qualified contracts, including custodial IRAs and Roth IRAs, we may be required to commute all or a portion of any remaining payments in order to comply with required minimum distribution rules that apply after an Owner's death.

Annuity options or GLWB for income?

- The GLWB calculates annual benefit payments based on the value of the GLWB benefit base. Annuity payments are generally based on contract value at the time you annuitize. The contract value and benefit base are typically different amounts. Due to this and other factors, the income provided by the GLWB and annuity options may be different.
- Liquidity. Future elective withdrawals are unavailable after the contract value is applied to an annuity option. In contrast, with the GLWB you retain access to your contract value at all times, but taking elective withdrawals may negatively impact your future benefit payments.

⁷ The values in the index account(s) will not be credited with index-linked interest until the end of the current index term for each index account. Therefore, index-linked interest will not be credited on any death benefit paid on a day that is not the end of the index term.

⁸ For qualified contracts, upon the death of the owner (annuitant if the contract is held as a Custodial IRA), we may shorten the remaining payment period in order to ensure that payments do not continue beyond the 10 year post-death distribution period provided under IRC section 401(a)(9), or beyond the beneficiary's life or life expectancy for certain classes of beneficiaries, such as a spouse or an individual who is not more than 10 years younger than the decedent. In such a case, the adjusted payment stream will be calculated by first calculating the commuted value of the remaining payments, and then calculating an actuarially equivalent payment stream over the revised period, using the same rate used in the commutation calculation.

Index Horizons helps you do more

with the conservative portion of your retirement savings

If this sounds like what you have been seeking, Index Horizons could be a great choice. It's a single premium fixed index annuity that helps you do more with the conservative part of your portfolio. It offers:

• 100% protection from market loss

Opportunity for growth

With Index Horizons, your index account value is credited with index-linked interest that reflects the performance of the market index or indices that you choose, up to the current cap rate for each index account. Your fixed account value will be credited with the current rate of interest on a daily basis.

Guaranteed income

When the time comes to use your assets as a stream of income that you can never outlive, Index Horizons has multiple choices available. You may elect the GLWB when the contract is issued, or may choose from traditional annuity options after the 5th contract anniversary, unless a shorter period is required by state law. Any of these income features can help you secure a pension-like stream of predictable income that can supplement Social Security and pension benefits.

You've been working with your financial professional to prepare for an active, healthy and long retirement. Now, as you lay the groundwork for the future you've envisioned, is the perfect time to consider adding Index Horizons to your retirement strategy.

Is Index Horizons the right product for the conservative part of your portfolio?



When you put your trust in a company for your retirement needs, you want to have confidence that the company you're considering will be there to honor its commitments.

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