

Index annuities are fixed annuities. Unlike variable products in which funds are invested in separate accounts and the investment risk is born by the owner, index annuity premium is placed in the insurance company's general account and is backed by the insurer. This section attempts to convey the concepts behind an index annuity. A dollar of index annuity premium is treated the same as any other premium dollar by the insurer. This means the insurer needs to invest the premium taking into consideration the expenses, contractual guarantees and goals of the annuity.

Index Annuity Concepts

Expenses

Bonds

Options

The Guaranteed Part

All fixed annuities offer a minimum guaranteed return. For fixed index annuities this minimum guarantee promises an accumulated value at least equal to the original principal by the end of the surrender period. To provide this minimum guaranteed return the insurance company invests in bonds or other instruments.

Every index annuity guarantees that at the end of the surrender period the original premium will still be there, even if the index steadily declines. Most index annuities credit a minimum interest rate of 3% a year; however this is usually credited on less than the full premium so the actual minimum interest earned is less. If the minimum rate is calculated on less than the full premium this allows the insurance company to channel more of the premium dollar to providing the potential for more interest earnings.

This is the same minimum rate offered by many traditional fixed annuities.

An Example

As an example, 3% interest compounded on 90% of the premium produces an effective seven year annual return of 1.46% and the over nine years the effective annual return is 1.85%. Why would one accept a minimum return calculated on less than 100% of the premium - because it may provide the potential for a higher overall return.

End of	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10
at 90%	0.0927	0.9548	0.9835	1.103	1.0433	1.0746	1.1069	1.1401	1.1743	1.2095
at 100%	1.0300	1.0609	1.0927	1.1255	1.1593	1.1941	1.2299	1.2668	1.3048	1.3439

3% Compounding

Say that an index annuity has a nine year term and credited 3% interest on 90% of the premium. The minimum return would be \$1.17 at the end of nine years for every \$1 of premium (\$1.1743 if you want to be exact). If you could find bonds that earn and reinvest at 7% interest, the insurance company would need to invest 63 Cents out of this dollar to provide \$1.17 in seven years.

The main goal of the minimum guarantee is to preserve the original principal - to give at least a dollar back by the end of term for every dollar put in. A minimum rate 3% interest compounded on 90% of the premium would give back \$1.17 for every \$1 put in which means we exceeded our goal. If we had

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credited 3% on 100% of the premium the minimum return would have been \$1.30 at the end of 9 years. But, if we could find those bonds earning and reinvesting at 7% the insurance company would need to invest 71 Cents out of each dollar to provide the \$1.30.

After the premium is placed in the insurer's general account we'll say that 9 cents out of every dollar goes to cover the agent expenses, insurance company expenses and insurance company profits. That means we have 91 cents remaining from our premium (in actuality these expenses are prorated and taken over an extended number of years).

The next step is ensuring that the minimum guaranteed return is met. The amount needed to protect the minimum guaranteed return depends upon what percentage of premium the minimum return is calculated on and the return earned on the insurance company's portfolio. If we go back to our example, a minimum return based on 90% of the premium would require 63 Cents and a minimum return based on 100% of the premium would require 71 Cents of the dollar.

At 90%
\$1.00 Premium
-0.09 Expenses
-0.63 Guaranteed Part
\$0.28 Available for Options

We have 91 cents remaining after expenses. A 90% guarantee would cost 63 cents leaving 28 cents remaining. A guarantee based on 100% of the premium would cost 71 Cents which leaves 20 cents remaining. A higher guarantee costs more which means fewer pennies are left to buy the options which provide the potential for excess interest.

The Option Part

Most insurance companies buy options on the underlying index. An option gives you the right - not the obligation, to buy or sell something within a period of time. When you compare buying direct equity investments outright with investing in a combination of bonds and options, buying options in this manner is a more conservative financial strategy.

To use a specific stock example...say that you could buy a share of XYZ stock for \$50. If you bought the stock and it rose to \$60 you could sell it and net a \$10 profit.

Instead of buying the actual stock we could buy an option that gives us the right to buy the stock for \$50 at anytime over the next year. The cost of the option is \$2. If the stock price rose to \$60 we would use or exercise our option and buy the stock at \$50, sell the stock at \$60, and make \$10 - less the \$2 cost of the option. Buying an option gives us the right to participate in the growth of the value of the stock, but the real story

Buying Stocks

Maximum Upside - Unlimited
Maximum Loss - Cost of Stock

Buying Options

Maximum Upside - Unlimited
Maximum Loss - Cost of Option



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behind options is what happens if the stock goes down.

What would happen if we bought the stock at \$50 a share, but instead of going up it went down. If the price of XYZ stock fell to \$40 or \$30 or \$10 a share we'd lose \$10 or \$20 or \$40 a share. However, options give us rights, not obligations. If we had bought an option for \$2 instead of buying the stock itself, and the price of the stock fell to \$40, \$30, \$10 or even zero, the most we can lose is \$2 - the price of our option.

<p style="text-align: center;">At 90%</p> <p>\$1.00 Premium - 0.09 Expenses - 0.63 Guaranteed Part \$0. 8 Available For Options</p>

If at the end of the ninth year the Federal Stock Index had a value greater than 100 you'd use the option. If the index was at 150 you'd exercise the option to buy the index at 100, sell the index at 150 and make a gain of 50%. $[(150-100)/100 = .50]$.

If the index was at a level of 100 or less you wouldn't use the option. But, even if the index was down 20%, 40% or 100% the most you would lose is the money you paid for the option.

This how index annuities participate in the index. Although option prices are more volatile than direct equity prices and if the index closed lower than the 100 the option would be worthless while the index itself would still have value, the combination of owning both the option and the bonds means the index annuity owner still receives a minimum return even if the index goes down and the option expires worthless.

We said that a guaranteed return based on 3% interest compounding on 90% gives back \$1.17 for each dollar of premium, or another way to say this is you get back at least 117% of what you started with. If the Federal Stock Index is at the 100 level today we know that the index would have to grow past the 117 level ($117\% \times 100$) before we'd make more than the minimum guarantee.

Since the first 17% of any index gain is covered by the guaranteed part we would only need to share in index growth when it passes 117. So, we would buy an option that allows us to participate in index growth beyond 117.

We're going to say that a "full" option for the right to buy the index at 117 costs 28 cents. A "full" option means that for every 1% increase in the index over 117 we'd receive 1% in excess interest credited to our annuity above the minimum guarantee. A full option is another of saying a "100% participation rate" or a "zero percent spread".

If the index was at 117 or lower at the end of nine years we wouldn't use our option and it would expire worthless. However, we'd still have earned \$1.17 for each \$1 of premium from the minimum guarantee produced by the bonds. If the index was over 117 at the end of nine years, we'd *exercise* our option, which means we'd use our option to buy the index at 117 and sell it for a profit at the higher index value.

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What if the index level was 180 at the end of nine years? If you exercised the option at 117 and the index value was 180, you'd have gained 63 points. We would add these 63 points - or 63 cents on each \$1 of premium to the minimum guaranteed return of \$1.17, to produce total interest earned of \$1.80 for each \$1 of premium. Our total interest credited for the nine year period is 80% $[(.63 + 1.17)/ \$1 = 80\%]$.

Simplistically, this is how a term point-to-point index annuity works. Because we were able to buy a "full" option for our 28 cents which gave us a 1% increase in interest for each 1% movement of the index, the participation rate on our annuity was be 100%.

But, what if a "full" option costs 56 cents and we only have 28 cents available out of the premium dollar? We'd only be able to buy half of the option, so the index annuity would only receive half of any increase in the index. This would translate into a participation rate on the annuity of 50%.

Or, what if a "full" option cost 14 cents and we have 28 cents to work with. We'd be able to buy twice as many options. This would translate into a participation rate of 200% on our index annuity.

When a company offers a participation rate greater than 100% it doesn't mean magic is being used as when a magician seems to overfill a glass of water. And when a carrier has a participation rate less than 100% it doesn't mean the insurer is skimming options off the top and putting some in their pocket. The participation rate or spread depends upon how many options you can afford to buy for your index crediting method.

Different factors affect the amount of options you can buy. The cost of the option greatly affects how many we can buy as does the specific crediting method used by the annuity, as well as the minimum guarantee. In our example using a minimum guarantee based on 90% of the premium we said that we had 28 cents left over to buy options after covering expenses and the guaranteed part. But, if the minimum guarantee is based on 100% of the premium we determined that it took more of that dollar of premium to pay expenses and cover the guarantee, so only 20 cents would remain for options. However, the minimum guarantee means we'll get at least 130% of our premium back. The option we buy on the index doesn't kick in until the index is up 130% instead of 117%, so even though we have fewer pennies available to buy the option at a 100% premium basis, the option costs a little less because we're letting the option seller keep more of the initial increase.

What does all this mean?

The index annuity owner is not buying a stock investment. The index annuity is a fixed annuity with minimum guarantees. The insurance company invests from the general account to provide the potential for excess interest beyond the minimum guarantee, usually through options. The great thing about options is they give you rights, not obligations. So, how safe is an index annuity? It's as safe as the insurance company backing the annuity.

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The participation rate depends upon the amount of options that can be purchased after covering expenses and the guaranteed return. If the insurer only has enough money left over to buy 80% of a “full” option then the annuity participates in 80% of any growth. The insurer doesn’t “get the other 20%” of the option because there was no money to buy the other 20% - the seller of the option keeps it.

Total Return

180 Ending Index Level
-117 Exercise Price
63 Index Gain

x 1 Full 100% Rate

\$0.63 Index Annuity Gain

+1.17 Minimum Guarantee

\$1.80 Index Annuity Interest

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