

Example 10 demonstrates why the design does satisfy the minimum requirements. The 100% @ 2% exceeds 90% @ 3% at every point in time for at least 10 years. If the table were extended one year, it would show that the guarantee has to revert to 3% after 10 years in order to satisfy the SNFL minimums. The result of demonstrations like Example 11 was that states approved this type of GMAV. There are still some states, however, that will not accept any kind of interest accumulation less than 3%

This section provides a somewhat high level look at the introduction and evolution of EIA designs. It is not intended to include every design idea that has ever been considered or introduced in the EIA marketplace. But it does provide a general basis for understanding common EIA design features and why they exist. New innovations in product design will emerge as insurers respond to the adoption of the NAIC model Standard Nonforfeiture Law for Individual Deferred Annuities. The following section will build on the information in this section to discuss pricing and design considerations recommended for the EIA product development process.

Pricing and Design Considerations

EIA Funding

First and foremost in pricing an EIA is considering how the product will be funded. An investment is made that can earn interest at a specific rate. The investment has to cover necessary expenses and profit and the excess is used to give the policyholder a return.

Traditional or Declared Rate Annuity Funding
 $\text{Credited Rate} = \text{Investment Earnings Rate} - \text{Margin for Expenses and Profit}$

For EIAs, the credited rate is made up of two elements, the GMAV and the Index-Based Interest component. An easy way to visualize the pricing model is to fund the GMAV, expenses, and profit and then use the remainder to determine an option budget to fund Index-Based Interest. The option budget is then applied at current option costs to determine the Index-Based Interest that can be afforded.

EIA Funding
 $\text{Premium} = \text{GMAV Costs} + \text{PV of Expenses/Profit} + \text{Index-Based Interest Budget}$

Example 11: Funding an EIA (Multi-Year Guarantee)

Net Earned Rate	5.00%	
GMAV	90% @ 3%	
Index Period	10 Years	
Initial Bond Cost (GMAV Cost)	74.25%	$= [0.90 * (1.03^{10})] / [1.05^{10}]$
PV of Expenses/Profit	10.50%	
PV of Index-Based Interest Budget	15.25%	

So, from Example 11, once the GMAV is funded for 74.25% of premium and the expenses and profit of 10.50% of premium are set aside, the Index-Based Interest budget