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## Table of Contents (Detailed)

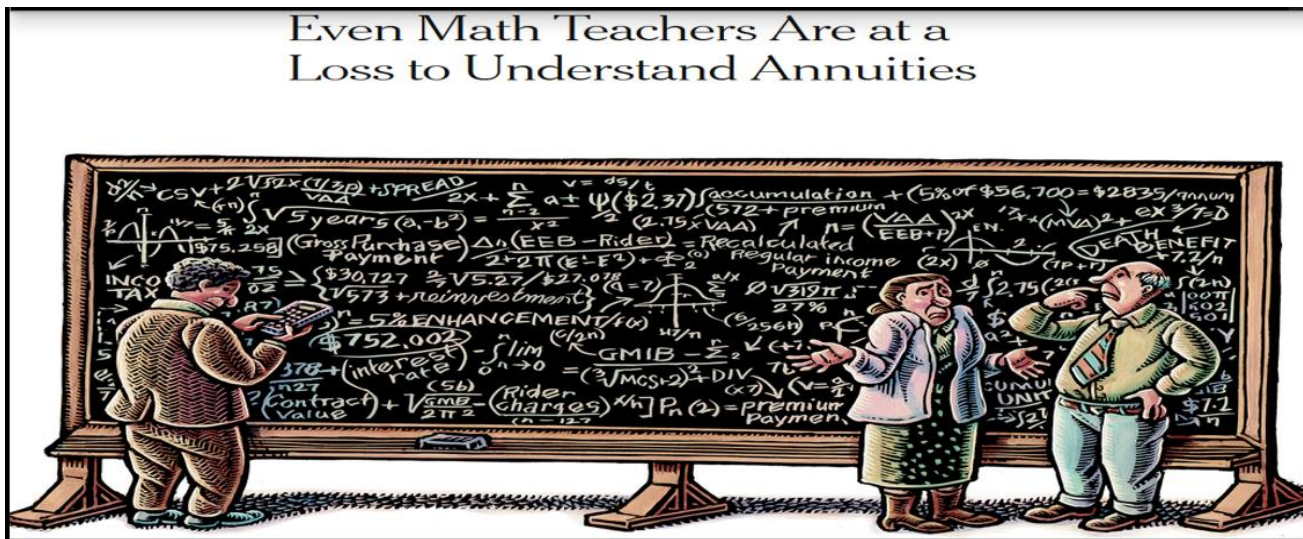
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## PRIMA-ONE™ for Financial Advisers (Manual Input Version)

Introduction to the role of Deferred Annuities in 401(k) portfolios



Credit New York Times

Deferred Annuities (**DAs**) can play an important role in a 401(k) portfolio. It's easy to be intimidated by them and even though the language in a contract may look quite complicated, all Deferred Annuities follow a similar simple general set of rules.

We will do 5 things to help you decide if a Deferred Annuity should be in a 401(k) plan:

- Help you better understand and demonstrate Deferred Annuities
- Show that all types of Deferred Annuities follow the same basic principles
- Show they can be complicated, but only for those who need to price and administer them but not for financial advisers using PRIMA-ONE™
- Introduce you to PRIMA-ONE™ that will help you present them and also help you to better comply with **Best Interest** requirements
- Using PRIMA-ONE™, evaluate a 401k portfolio's ability to maximize investment returns to help provide a good and adequate retirement income

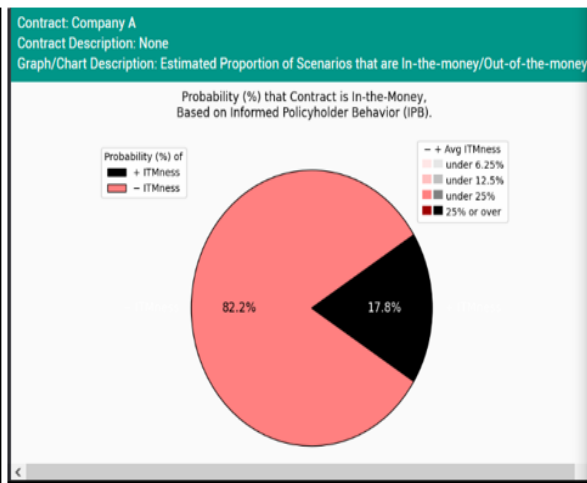
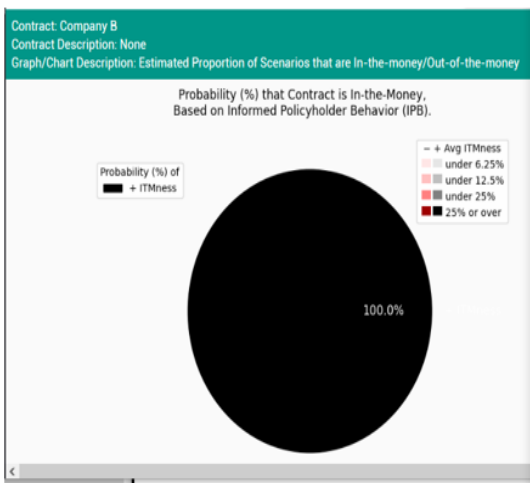
This is a simple way to present deferred annuities by demonstrating that:

- They often get an undeserved bad rap from critics in the media for being too complicated or not a good buy
- They're not that complicated
- There's a simple quantitative method for evaluating and comparing them, not only to other annuities, but also to other investments
- The PRIMA-ONE™ app not only implements this quantitative method, but also produces easy-to-understand non-numeric evaluation charts using PRIMA™'s 'In-the-*red*', in-the-*black*' color/shading scale

**401(k) PORTFOLIO EVALUATION USE “RED-to-BLANK” SCALE PARADIGM**

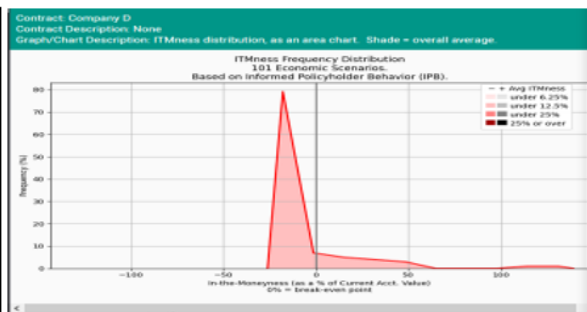
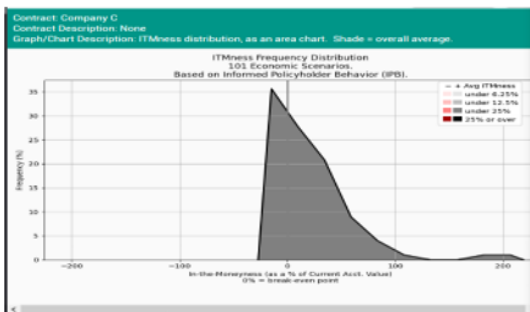
**VERY PROFITABLE**

**NOT PROFITABLE**



**MODERATELY PROFITABLE**

**NOT A GOOD BUY**



**What is a Deferred Annuity?**

- It acts like a simple bank savings account
- this bank account is called the “Accumulation Fund” or ‘the Account Value’

- It's 'bank account' earns interest and has charges for fees and riders
- It's the cornerstone of the contract because its growth will directly or indirectly determine future income payments
- The feature that separates one deferred annuity type from another, is simply how the interest credited to its 'bank account' is determined
- They can all have similar death and income benefits, The most important of which, if present, is the Guaranteed Income rider

All Deferred Annuities have an Accumulation Fund (also '*Account Value*'), that simply credits your contributions and adds interest and deducts charges and fees during the Accumulation Phase before (*the period before electing a retirement income such as annuitization or stream of withdrawals*).

## INTEREST CREDITING METHODS

- **FIXED:**
  - Credited Rates are fixed at Issue and guaranteed for a certain number of years or for life
- **VARIABLE:**
  - Credited Rates are based on an asset's growth rates, less any fees and expenses, of monies invested in *real* Mutual Fund Sub-Account Assets.
- **INDEXED:**
  - Unlike Variable there is no direct investment in the account's assets. Instead, Credited Rates are '*Derived*' from an asset's growth rates using a formula that applies adjustments, such as spreads, caps, participation rates and floors to a sub-account's growth in its index.

## INDEX TYPE PRODUCTS

Unlike Variable, for all Index-Type products, no monies are invested in real assets. Note that the first two do not require registration with the SEC because their principal is protected and they don't cross the line into securities as per [SEC Rule 151A](#).

- **FIXED-INDEXED:**
  - Credited Rates are derived by various methods that apply adjustments, such as spreads, caps, participation rates and zero floors to a sub-account's growth in its index.
- **FIXED INDEX-LINKED (FILA):**
  - Gains are accumulated but unlike other Indexed products they are all or part at risk and the fund will be reduced by any losses not to exceed all or part of its gains.
- **REGISTERED INDEX-LINKED (RILA):**
  - Credited Rate types are:

- **Buffer:** The insurer absorbs the first portion of losses. For example, the first 10%. Policyholder takes any loss beyond that
- **Floor:** It's the opposite of Buffer where the Policyholder chooses the maximum % they're willing to lose, i.e., the Insurer absorbs any losses **after** that instead of before. So has a lower potential downside
- **CAPS, SPREADS and PARTICIPATION RATES:**
  - Can apply to the upside in all Index types above. However, policyholder will get a better deal on constraints if they choose a larger downside i.e. smaller Buffer or higher Floor

### Examples:

**FIXED** – where the Credited Interest is a fixed 3% per annum for a SPDA

BOY	BOY Fund	Annualized Intr. %	Interest Credited	Fees & Charges	Contributions	EOY Annual Withdrawals	Fund EOY	EOY Age(s)	Fund(s)
A	B	C	D	E	F	G	H	I	J
1	0.00	3.0000000	193.10	-100.00	12,000.00		12,093.10	48	ALL
2	12,093.10	3.0000000	565.54	-100.00	12,600.00		25,158.64	49	ALL
3	25,158.64	3.0000000	957.98	-100.00	12,600.00		38,616.62	50	ALL

**VARIABLE** - Interest is based on a sub-account's actual market growth (+ or -) less any fees

BOY	BOY Fund	Annualized Intr. %	Interest Credited	Fees & Charges	Contributions	EOY Annual Withdrawals	Fund EOY	EOY Age(s)	Fund(s)
A	B	C	D	E	F	G	H	I	J
1	0.00	7.2351180	313.75	-49.49	12,000.00		12,264.26	48	ALL
2	12,264.26	-19.7826541	-3,298.29	-125.32	12,600.00		21,440.65	49	ALL
3	21,440.65	11.8295637	3,327.81	-222.36	12,600.00		37,146.09	50	ALL

**FIXED-INDEXED** - interest is derived, by a formula applied to the index's growth

BOY	BOY Fund	Annualized Intr. %	Interest Credited	Fees & Charges	Contributions	EOY Annual Withdrawals	Fund EOY	EOY Age(s)	Fund(s)
A	B	C	D	E	F	G	H	I	J
1	250,000.00	5.4000000	13,500.00		12,000.00		275,500.00	48	ALL
2	275,500.00	0.0000000	0.00		12,600.00		288,100.00	49	ALL
3	288,100.00	8.0000000	23,048.00		12,600.00		323,748.00	50	ALL

If the participant dies during the Accumulation Phase, the Accumulation Fund's balance (or a higher floor called the Minimum Guaranteed Death Benefit – *MGDB*) will be paid to the beneficiary.

Boy Scouts – Be Prepared!

**Annuities need to be monitored on an on-going basis** to optimize their cash returns. However, to monitor the DA, you'll need a sophisticated analytical tool. Currently, PRIMA™ is the only effective tool that's available.

What follows will teach you how use PRIMA-ONE™ to purchase and perform this monitoring and at any point in time, estimate returns for various elections, based on available options in the contract.

### Manual Input where product is not predefined

This section covers PRIMA-ONE™. the manual version of PRIMA™. This will only be necessary if the product is not predefined. Your job will be to get a minimum subset of input data for the app from: *the contract, recent statements and the Insurance Company*. So, be prepared to do your investigative homework. Your Client's future retirement is at stake, so investing some time initially, will result in major dividends. Be prepared to re-visit the app from time to time, especially when there are major changes to personal attributes or movements in the markets that immediately affect the value of the portfolio's underlying assets.

First, select the participant and click on the edit button to get the Main Menu below:

The App's 2 other main areas are:

- **Portfolios** (Current & Workbench)
- **Results** (Reports and Charts)

### **PRIMA™ supports 2 separate portfolios – Current & Workbench**

- Current – is the current portfolio you wish to evaluate or change
- Workbench – is the sandbox in which you can evaluate and compare possible alternative portfolios

As shown below on the lower left:

PRIMA-FIRST™ v2.51.0 Participant: Smith, Joan Evaluation Date: 07/01/2026 by InjAnnuity

**Main Menu**

- Evaluation Date
- Participant
- All Results

**Participant and Beneficiary Information**

This information is used for Evaluation purposes. If an actual birthdate is not available, please use your best approximation (based on other information).

Feature	Participant	Beneficiary
First Name, MI:	Joan j	Jack
Last Name:	Smith	Smith
Gender:	Male <input type="checkbox"/>	Male <input checked="" type="checkbox"/>
Birthdate <sup>1</sup> :	07/01/1979	07/01/1977
Age at Eval Date:	47	49

<sup>1</sup> Changing a birthdate might invalidate data already entered in Contributions and Rebalancing, and other places. Always review your data after such a change.

**Feature Setting**

Email Address: \_\_\_\_\_

Mobile Phone#: \_\_\_\_\_

Other Phone#: \_\_\_\_\_

Notes: \_\_\_\_\_

Save Cancel

Then, click on Current Portfolio then Select “1. Copy PRIMA’s default Portfolio” then click on ‘Save’

PRIMA-FIRST™ v2.51.0 Participant: Smith, Joan T by InjAnnuity

**Main Menu**

- Evaluation Date
- Participant
- All Results

**Portfolios**

- Current
  - Assumptions
  - Components
  - Evaluate Portfolio
- Workbench

**Participant's Current Portfolio is not defined**

To create a new Current Portfolio, select an option below, then click the Save button.

1. Copy PRIMA's default Portfolio

2. Copy your other Portfolio NOTE: Only the rows tagged "Include in Portfolio" will be copied.

Save Cancel

..... to get the default starter for the ‘Current’ portfolio consisting of 2 products

PRIMA-FIRST™ v2.51.0 Participant: Smith, Joan T by InjAnnuity

**Main Menu**

- Evaluation Date
- Participant
- Portfolios
  - Current
    - Assumptions
    - Components
    - Evaluate Portfolio
    - Workbench
- All Results

**Contents of Current Portfolio**

Include in Portfolio	Product Type	Product ID	Product Name	Edit	Evaluate	Copy	Start Date	Balance Date	Balance	Delete
<input checked="" type="checkbox"/>	Variable	A1. ANN-1. VDA w/CPI-GWB -					03/01/2025	03/01/2025	0.00	
<input checked="" type="checkbox"/>	Investments	I1. INV-1. Mutual Fund S&P 5t					03/01/2025	03/01/2025	0.00	

Evaluation Date: 03/01/2025

Paste Row Add Row

Next go to ‘Workbench’ to get the portfolio below, consisting of various product boilerplates. This is your sandbox for testing.

PRIMA-FIRST™ v2.51.0 Participant: Smith, Joan Evaluation Date: 07/01/2026 by InjAnnuity

**Main Menu**

- Evaluation Date
- Participant
- Portfolios
  - Current
  - Workbench
    - Assumptions
      - Taxes
      - Longevity
      - Contributions
      - Retirement Goals
      - Parameters for Runs
    - Components
    - Evaluate Portfolio
- All Results

**Workbench Portfolio Components**

Include in Portfolio	Product Type	Product Name	Issue Date	Balance @Eval Date	Edit	Evaluate	Copy	Product ID	Delete
<input checked="" type="checkbox"/>	Investments	1. Mutual Fund - S&P 500	07/01/2026	0					
<input checked="" type="checkbox"/>	Variable	2a. Variable with GLWB	07/01/2026	0					
<input type="checkbox"/>	Variable	2b. Variable with Granularity	07/01/2026	0					
<input type="checkbox"/>	Fixed	3a. Fixed - Mkt	07/01/2026	0					
<input type="checkbox"/>	Fixed	3b. Fixed, Constant	07/01/2026	0					
<input type="checkbox"/>	Indexed	4a. Indexed - APTP	07/01/2026	0					
<input type="checkbox"/>	Indexed	4b. Indexed - MAVG	07/01/2026	0					
<input type="checkbox"/>	Indexed	4c. Indexed - MPTP	07/01/2026	0					
<input type="checkbox"/>	RILA	5a. RILA - Buffer	07/01/2026	0					
<input type="checkbox"/>	RILA	5b. RILA - Floor	07/01/2026	0					
<input type="checkbox"/>	FILA	6. FILA	07/01/2026	0					
<input type="checkbox"/>	DIA	7. DIA	07/01/2026	100000					
<input type="checkbox"/>	Variable	8. In GWB Payout (Variable)	07/01/2026	100000					

Paste Row Add Row

**Note:** After a change to any of the above dates or dollar amounts, you must review all related data, to ensure that it is fully consistent with these new values.

Let's get started

The default boilerplate line-items were pre-defined because they're quite common and the goal is to later customize their data to handle your portfolio. However, you can choose from a wide variety of boilerplates.

We highly recommend this approach versus entering all the information from scratch. So, let's go through each of the four main areas in the order listed, starting with:

The **Current** portfolio.

Assumptions for All Portfolio Line-Items:

Next, fill in information ranging from **Taxes** to **Options for All Runs** that's **common** to all contracts in the portfolio. Here, we start with Taxes where it's simply the rates for the Accumulation and Decumulation Phases.

The screenshot shows the PRIMA-FIRST v2.51.0 interface. The top bar displays 'Participant: Smith, Joan' and 'Evaluation Date: 07/01/2026'. The left sidebar contains a 'Main Menu' with options: Evaluation Date, Participant, Portfolios (Current, Workbench), Assumptions (Taxes, Longevity, Contributions, Retirement Goals, Parameters for Runs), Components, Evaluate Portfolio, and All Results. The 'Taxes' section is selected, showing a disclaimer: 'This information is used for Evaluation purposes. If any actual details are not available, please use your best approximation (based on other information).' Below this, it states 'Personal Tax Rates -- Total from all sources (Fed, State, etc.)' and 'Income Tax Rates (%): During Accumulation Phase: 22 Retirement Phase: 12'. 'Save' and 'Cancel' buttons are visible at the bottom.

Estimated Longevity

For longevity you have 4 choices:

1. Enter the age that you expect the participant to live to
2. Click on [Estimate this "Live to age"](#) that will bring you to a 3<sup>rd</sup> party app that will ask you longevity related questions and provide you with an estimate
3. Use some other 3<sup>rd</sup> party app (there are several)
4. Or enter 0 which will tell the system to do its own estimate

If any Joint income options are available, then you'll need to enter the longevity estimate for the 2nd person (usually a spouse).

Next, Enter [Contributions](#) for both Employee and Employer – Introduction Summary

PRIMA-FIRST™ v2.51.0 Participant: Smith, Joan Evaluation Date: 07/01/2026 by InjAnnuity

**Main Menu**

- Evaluation Date
- Participant
- ▼ Portfolios
  - ▶ Current
  - ▼ Workbench
    - ▼ Assumptions
      - Taxes
      - Longevity
      - Contributions
      - Retirement Goals
      - Parameters for Runs
    - Components
    - Evaluate Portfolio
- All Results

### Longevity

This information is used for Evaluation purposes.

Feature	Participant	Beneficiary
Birthdate:	07/01/1979	07/01/1977
Current Age:	46	48
Live to age:	87	82 <a href="#">Estimate</a>

[Save](#) [Cancel](#)

Opens Northwestern Mutual's Lifespan Calculator. Does not imply any relationship between InjAnnuity and Northwestern Mutual, nor any endorsement from them.

Next, Enter Contribution Dates

PRIMA-FIRST™ v2.51.0 Participant: Smith, Joan Evaluation Date: 07/01/2026 by InjAnnuity

**Main Menu**

- Evaluation Date
- Participant
- ▼ Portfolios
  - ▶ Current
  - ▼ Workbench
    - ▼ Assumptions
      - Taxes
      - Longevity
      - Contributions
      - Retirement Goals
      - Parameters for Runs
    - Components
    - Evaluate Portfolio
  - All Results

**Planned Contributions**

Topics

- Introduction
- Contribution Dates
- Contribution Amounts
- % Allocations to Product Types

← Prev. Topic

### Contribution Dates

First Contribution Date: 07/01/2026

Future contributions will be made on:

the same day of the month as above  the final day of the month

Final Contribution Date: 06/01/2046 The final contribution is on this date.

Notes:

- Dates can be in the past and/or future, within the Participant's live-to age.
- Once set, you should not have to change them, unless the day-of-month changes, or the Final Date changes.
- If you *do* change *any* information above, **remember to review all** of the dependent topics, and revise them as needed.

← Prev. Topic [Save](#) [Cancel](#) Next Topic →

Next click on **Contribution Amounts**, to get this page:

**PRIMA-FIRST™ v2.51.0** Participant: Smith, Joan Evaluation Date: 07/01/2026 by InjAnnuity

**Main Menu**

- Evaluation Date
- Participant
- Portfolios**
  - Current
  - Workbench
    - Assumptions
      - Taxes
      - Longevity
      - Contributions
      - Retirement Goals
      - Parameters for Runs
    - Components
    - Evaluate Portfolio
- All Results

**Planned Contributions**

**Topics**

- Introduction
- Contribution Dates
- Contribution Amounts
- % Allocations to Product Types

**Contribution Amounts** Contributions from 07/01/2026 thru 06/01/2046

← Prev. Topic      Next Topic →

Source	Planned Monthly Contributions
Employee ...are the same for all months: <input checked="" type="checkbox"/>	Amount: <input type="text" value="500"/>
Employer ...are the same for all months: <input checked="" type="checkbox"/>	Amount: <input type="text" value="500"/>

Have PRIMA project CPI-based Increases to the above Contributions.  
CPI=Consumer Price Index.  
 CPI-based adjustments are in addition to the amounts entered above.

← Prev. Topic      ✓ Save      ✕ Cancel      Next Topic →

After clicking on **Enter Amounts**, the user will get this page:

Schedule of Amounts -- Payment Patterns, Jan-Dec

Effective Date mm/dd/yyyy	Same each Mth	All months	Del Row
03/01/2025 ▾	<input checked="" type="checkbox"/>	<input type="text" value="1000"/>	

Add a Row

« < > »

Save Cancel

Next, Enter % Allocations to Product Types in the Portfolio

PRIMA-FIRST™ v2.51.0 Participant: Smith, Joan Evaluation Date: 07/01/2026 by InjAnnuity

Main Menu

- Evaluation Date
- Participant
- ▼ Portfolios
  - Current
  - ▼ Workbench
    - ▼ Assumptions
      - Taxes
      - Longevity
      - Contributions
      - Retirement Goals
      - Parameters for Runs
    - Components
    - Evaluate Portfolio
- All Results

Planned Contributions

Topics

- Introduction
- Contribution Dates
- Contribution Amounts
- % Allocations to Product Types

% Allocations to Product Types Contributions from 07/01/2026 thru 06/01/2046

For the months between dates: Maintain Specified Contribution ratios ▼

Allocations (%) to:	Mutual Fund	Variable	Fixed	Fixed Indexed	RILA	FILA	DIA	TOTAL (%)
Starting:								Must total 100%
07/01/2026 ▼	50	50	0	0	0	0	0	100.000%

# of Selected Portfolio Line Items accepting Contributions on/after the Effective Date: 0 1  
2 or more

Sanity Checks apply to all Contributions on and after the Evaluation Date.  
On Save, redundant rows will be dropped.

Next, click on **Retirement Goals** button to enter estimated retirement expenditures (\$3,000 a month) targeted to be covered by the 401(k) portfolio, and the participant's credit parameters (during retirement).

PRIMA-FIRST™ v2.51.0 Participant: Smith, Joan Evaluation Date: 07/01/2026 by InjAnnuity

Main Menu

- Evaluation Date
- Participant
- ▼ Portfolios
  - Current
  - ▼ Workbench
    - ▼ Assumptions
      - Taxes
      - Longevity
      - Contributions
      - Retirement Goals
      - Parameters for Runs
    - Components
    - Evaluate Portfolio
- All Results

Retirement Goals: Expenditures for retirement after age 67

For the Adequate Income Metric (AIM)

Enter Estimated Monthly Retirement Expenditures to be covered by this Portfolio:

These Expenditures<sup>1</sup> are the same for all ages:  Enter \$/month: 1500

<sup>1</sup> Enter in terms of today's costs and prices. PRIMA will adjust these for future inflation.

Participant's Post-Retirement Parameters:

Estimated Credit Rating: Average ▼

Risk Tolerance is: (C) Average ▼

Investment Fees (%): 0.5

Next, Select Single or Joint and various options for All Runs:

Assumptions for an Individual Line-Item:

The Portfolio

Next, click on **The Workbench's Portfolio's Contents**

This is the most important section and contains the description of the actual 401(k) portfolio to be projected and evaluated. This is our sandbox for testing various combinations of line-items to test for the best portfolio that will optimize future retirement income.

To test the various combinations simply select the desired line-items by clicking on [Include in Portfolio](#).

Include in Portfolio	Product Type	Product Name	Issue Date	Balance @ Eval Date	Edit	Evaluate	Copy	Product ID	Delete
<input type="checkbox"/>	Investments	1. Mutual Fund - S&P 500	07/01/2026	0					
<input type="checkbox"/>	Variable	2. Variable with GLWB	07/01/2026	0					
<input type="checkbox"/>	Fixed	3a. Fixed - Mkt	07/01/2026	0					
<input type="checkbox"/>	Fixed	3b. Fixed, Constant	07/01/2026	0					
<input type="checkbox"/>	Indexed	4a. Indexed - APTP	07/01/2026	0					
<input type="checkbox"/>	Indexed	4b. Indexed - MAVG	07/01/2026	0					
<input type="checkbox"/>	Indexed	4c. Indexed - MPTP	07/01/2026	0					
<input type="checkbox"/>	RILA	5a. RILA - Buffer	07/01/2026	0					
<input type="checkbox"/>	RILA	5b. RILA - Floor	07/01/2026	0					
<input type="checkbox"/>	FILA	6. FILA	07/01/2026	0					
<input type="checkbox"/>	DIA	7. DIA	07/01/2026	100000					
<input type="checkbox"/>	Variable	8. In GWB Payout (Variable)	07/01/2026	100000					

**Note:** After a change to any of the above dates or dollar amounts, you must review all related data, to ensure that it is fully consistent with these new values.

By clicking on the **Edit** button, the user can define and customize each row of the portfolio.

Note also that each line-item has its own set of Audit reports (**Evaluate**). This allows the user to see where all the first-principles numbers used to produce the higher-level Evaluation reports came from. If there's a problem at the high-level, this is where you'll find its source so that you can address it by making changes at this level.

So, let's look at how the first line-item is defined:

We do this by clicking on the **Edit** button for **Variable** then **Product Definitions/Basics** to get:

From Provider

Next, click **Features** to fill in the following:

Next, we'll look at the very important **Accumulation Fund**

## Accumulation Fund

PRIMA™ Contract Editor    Editing: 2a. Variable with GLWB    Evaluation Date: 07/01/2026    All Results ▶

Minimum Info Required

- From Provider
  - Basics
  - Features
- Accumulation Fund**
- Income
  - Riders
- From Participant
- Reports

← Prev. Topic    to App    Next Topic →

### Accumulation Fund

Also called the Account Value. This fund is a total of one or more Subaccounts.

Your entries here will let PRIMA™ project future balances for the Account Value. This topic includes these general areas:

- Define Subaccounts.
  - For either Variable or Fixed-Indexed Subaccounts, define which Asset Classes they map into.
  - For Fixed-Indexed, enter their Crediting Parameters
  - For Fixed Funds, enter the Crediting Rates for one or more Fixed Subaccounts.
- Define Deductions for Fees and Charges

← Prev. Topic    Next Topic →

Next expand the '+' to get its submenu of '**Subaccounts**' and '**Account Value Deductions**' then click on 'Subaccounts' to get the Guidelines for investment-type subaccount Asset-Class Mapping

PRIMA™ Contract Editor    Editing: 2a. Variable with GLWB    Evaluation Date: 07/01/2026    All Results ▶

Minimum Info Required

- From Provider
  - Basics
  - Features
- Accumulation Fund
  - Subaccounts**
  - Account Value Deductions
- Income
  - Riders
- From Participant
- Reports

← Prev. Topic    to App    Next Topic →

### Product's Base Fund Components

A Product may offer different kinds of Funds, or Sub-accounts. A Contract may incorporate any number of these, each non-empty Sub-account contributing to the Contract's total Account Value.

Sub-accounts generally fall into Variable, Indexed, and Fixed Types. (You define your Contract's Fixed Types separately.)

In this App, you build up Variable and Indexed Sub-accounts by "blending" the original NAIC-Standard Classes below, in *Provider-selected* proportions. We calculate new fund values based on these proportions.

Table of the Original NAIC-Standard Asset Classes

AAA <sup>1</sup> / AIRG <sup>2</sup>	Asset Class	Example Indexes	Volatility
MONEY	Money Market/ Short-Term	Three Month A Corporate Bonds	0%
INTGOV	U.S. Intermediate Term Govt Bonds	Five to Ten Year US Treasury Bonds	0% - 4%
FIXED	Diversified Fixed Income	65% INTGOV + 35% LTCORP	4% - 8%
LTCORP	U.S. Long Term Corporate Bonds	Ten to Thirty Year A & BBB Corporate Bonds	8% - 10%
BALANCED	Diversified Balanced Income	60% US + 40% FIXED (26% INTGOV + 14% LTCORP)	8% - 13%
US	Diversified Large Cap. U.S. Equity	S&P 500 Returns	13% - 18%
INT	Diversified International Equity	MSCI Europe, Australasia and Far East	14% - 19%
SMALL	Intermediate Risk Equity	Russell 2000	19% - 25%
AGGR	Aggressive or Specialized/Exotic Equity	Emerging Markets 67% + NASDAQ 33%	25%+
CPI	Treasury Inflation-Protected Securities	LTPZ, SPIP, GTIP	5% - 11%

Tip: If you don't know a Fund's standard breakdown, you can start by setting it to "Diversified Balanced Income". Later, once you've uncovered the actual breakdown, you can revise your Product definition accordingly. (Always re-calculate any Reports afterwards!) Ask the provider; they should be able to tell you how any Fund breaks down into its Standard Asset Classes.

<sup>1</sup> American Academy of Actuaries  
<sup>2</sup> Academy's Interest Rate Generator

← Prev. Topic    Next Topic →

The Volatility column is the 'Long-Term Expected Annualized Volatility' of the security. If you are still unsure which Asset Class the fund falls into, then you can google it along with 'Volatility' or 'Standard Deviation' (i.e., the Standard Deviation of the fluctuations in its returns) and pick a class that best matches it.

A subaccount must map to one or more of the asset-classes above, so next, let's go to [Define Base Funds/Indexes](#)

To get:

The screenshot shows the PRIMA Contract Editor interface. The left sidebar contains a navigation menu with options like 'Minimum Info Required', 'From Provider', 'Features', 'Accumulation Fund', 'Subaccounts', 'Define Base Funds/Indexes', 'Account Value Deductions', 'Income', 'Riders', 'From Participant', and 'Reports'. The main area displays 'Product's Base Fund Definitions' with a table of fund definitions.

ID	Fund Name	Blend of	Delete Fund	Referenced Status by
V-1	Money Mkt.			
V-2	US Gvt. Bonds			
V-3	Fixed Income			
V-4	US Corp. Bonds			
V-5	Diversified Balanced			
V-6	S&P 500			B
V-7	Diversified Int'l Equity			
V-8	Intermediate Risk Equity			
V-9	Aggr./Spec/Exotic Equity			
V-10	TIPS			

Reference types:  
 C: Contributions have been assigned to this Sub-Account.  
 W: Withdrawals have been assigned to this Sub-Account.  
 R: A Rebalancing level (%) has been assigned to this Sub-Account.  
 I: an Index has been defined using this ID. (Appears once for each use.)  
 B: a Sub-Account Balance has been set for this Sub-Account.

then click on **Blend of** for V-6, the only subaccount used in this instance

The screenshot shows the 'Investment Composition' dialog box. It displays a table titled 'Composition of Investment (Equivalent Asset Classes)' with columns for 'AAA', 'U.S. Standard Asset Class', and '% of Total'.

AAA	U.S. Standard Asset Class	% of Total
MONEY	Money Market/ Short-Term	0
INTGOV	U.S. Intermediate Term Gov't Bonds	0
FIXED	Diversified Fixed Income	0
LTCORP	U.S. Long Term Corporate Bonds	0
BALANCED	Diversified Balanced Income	0
US	Diversified Large Cap. U.S. Equity	100
INT	Diversified International Equity	0
SMALL	Intermediate Risk Equity	0
AGGR	Aggressive or Specialized/Exotic Equity	0
CPI	Treasury Inflation-Protected Securities	0

Total will be adjusted (pro rata) to 100%

Buttons: Save, Cancel

Reference types:  
 R: a Rebalancing level (%) has been assigned to this Sub-Account.  
 I: an Index has been defined using this ID. (Appears once for each use.)  
 B: a Sub-Account Balance has been set for this Sub-Account.

V-6 maps to only one Asset-Class - **Diversified Large Cap U.S. Equity @ 100%**

Next Click on Account Value Deductions

The screenshot shows the PRIMA Contract Editor interface. The top navigation bar includes 'PRIMA™ Contract Editor', 'Editing: 2a. Variable with GLWB', 'Evaluation Date: 07/01/2026', and an 'All Results' button. The left sidebar contains a tree view with categories like 'From Provider', 'Accumulation Fund', 'Subaccounts', 'Account Value Deductions' (highlighted), 'Income', 'Riders', 'From Participant', and 'Reports'. The main content area is titled 'Account Value Deductions' and contains the following text:

Covers all future fees and charges that will be deducted from Contract's Account Value. For example:

- Fixed Dollar Amounts deducted from:
  - Fixed Account Only (Non-Variable)
  - Variable Account Only
  - Total Account Value
- Annual Percent of Sub-Accounts (for Variable sub-accounts only)
  - These % Deductions are applied daily
- Percent of Premium
  - Enter percentage deduction based on year of contribution
- Rider and Other Charges
  - This category has its own Topic in the Outline.

Navigation buttons for 'Prev. Topic' and 'Next Topic' are visible at the top and bottom of the content area.

Then click on *% of Subaccounts*

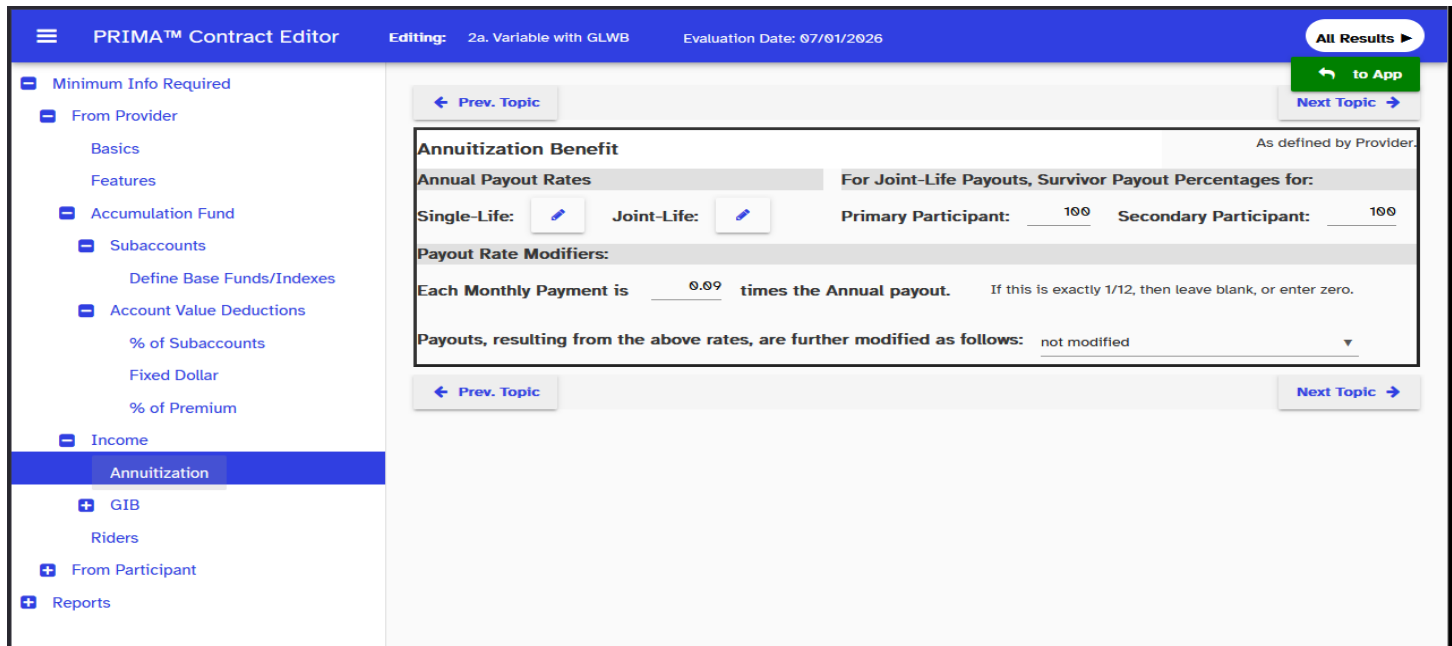
The screenshot shows the PRIMA Contract Editor interface with the 'Account Value Deductions' category expanded to 'Subaccounts' and then to '% of Subaccounts'. The main content area displays a table titled 'Sub-Accounts' Fees (as a % of subaccount balance) with the following data:

ID	Fund Name	Level?	Enter Rate(s)
V-1	Money Mkt.	<input checked="" type="checkbox"/>	Rate (%): 0.25
V-2	US Gvt. Bonds	<input checked="" type="checkbox"/>	Rate (%): 0.25
V-3	Fixed Income	<input checked="" type="checkbox"/>	Rate (%): 0.25
V-4	US Corp. Bonds	<input checked="" type="checkbox"/>	Rate (%): 0.25
V-5	Diversified Balanced	<input checked="" type="checkbox"/>	Rate (%): 0.25
V-6	S&P 500	<input checked="" type="checkbox"/>	Rate (%): 0.25
V-7	Diversified Int'l Equity	<input checked="" type="checkbox"/>	Rate (%): 0.25
V-8	Intermediate Risk Equity	<input checked="" type="checkbox"/>	Rate (%): 0.25
V-9	Aggr./Spec/Exotic Equity	<input checked="" type="checkbox"/>	Rate (%): 0.25
V-10	TIPS	<input checked="" type="checkbox"/>	Rate (%): 0.25

Below the table, it states: 'All fees above will be deducted from the Accumulation Fund Value (AV).'. Navigation buttons for 'Prev. Topic' and 'Next Topic' are visible at the bottom of the content area.

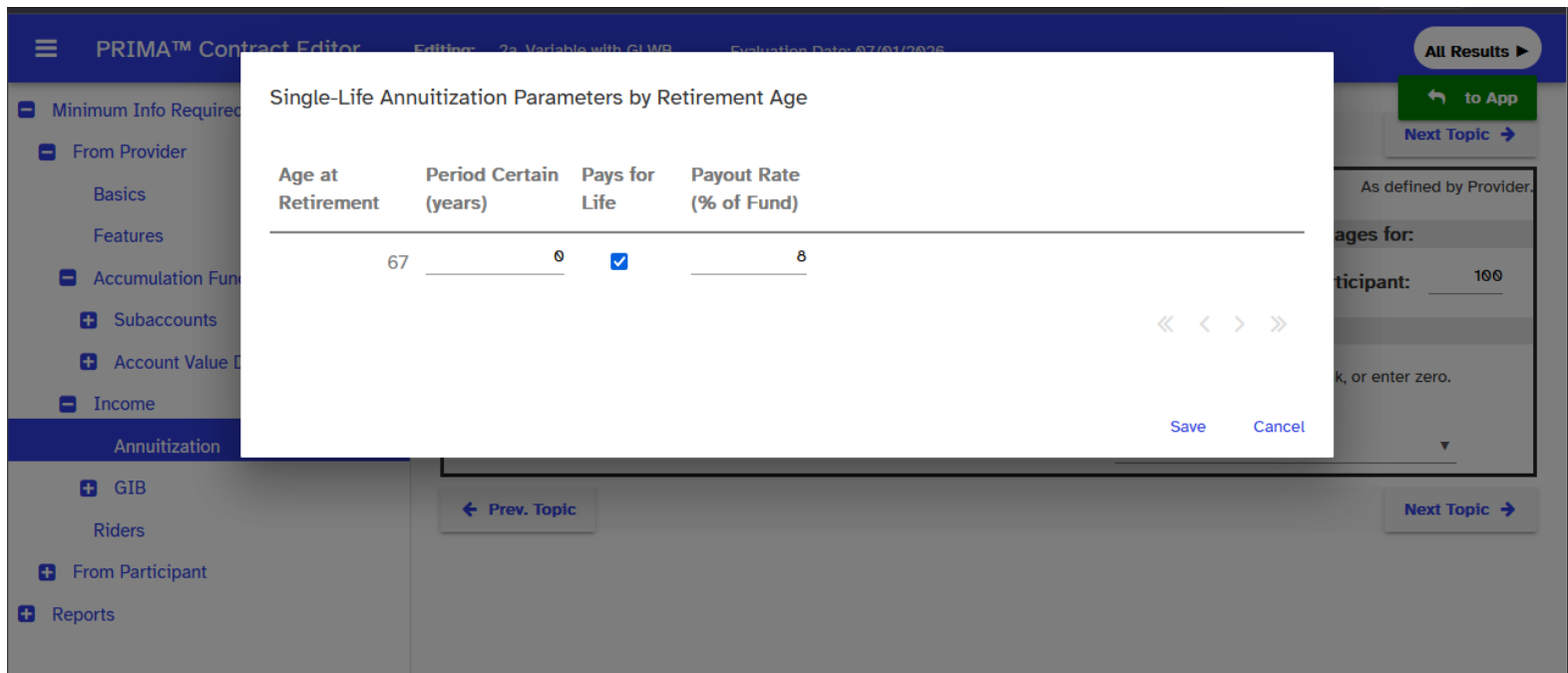
Here all subaccounts have the same Fee of 0.25%

Next, click on "Income" then [Annuitization](#) to get:



All annuities have an annuitization option. Here you enter the Single and Joint Rates and some other info about its payments.

After clicking on **See/Change Details** you can enter Single-Life Rate for Age 67, below:



Next click on **GIB** then “Features”, to get:

PRIMA™ Contract Editor | Editing: 2a. Variable with GLWB | Evaluation Date: 07/01/2026

From Provider

- Basics
- Features
- Accumulation Fund
  - Subaccounts
    - Define Base Funds/Indexes
  - Account Value Deductions
    - % of Subaccounts
    - Fixed Dollar
    - % of Premium
- Income
  - Annuitization
  - GIB
    - Features (Selected)
    - Charge Rates
    - Fund Crediting Rates
    - Base Payout =
- Riders

← Prev. Topic | All Results | to App | Next Topic →

### GIB Features

Guaranteed Income Payments (GIPs) are: Withdrawals from the Account Value

GIB Basis

**Accumulation Phase**

- Account Value can be Locked-In as a minimum Basis, in certain years.
- Allows CPI Fund Balance as a minimum Basis for Initial Income Payments.
- Product has a distinct GIB Fund...  ...with option to step up the GIB Fund Balance to the AV in certain years.
- GIB Fund Crediting Rates vary by Subaccount

**Income Phase**

- A Payment Step-Up Option is electable at certain year ends.
- On Death, any Remaining (Positive) Account Value Balance is paid to Beneficiaries

**GIB Rider Charge Rates**

- Rates vary by Subaccount

← Prev. Topic | Next Topic →

Then click on '+' to expand the submenu. Then click on '**Guaranteed Income Benefit (GIB)**' then click on '**Features**' to select this products GIB features as shown above.

Next, **Click on** Charge Rates/Accumulation Phase

PRIMA™ Contract Editor | Editing: 2a. Variable with GLWB | Evaluation Date: 07/01/2026

From Provider

- Basics
- Features
- Accumulation Fund
  - Subaccounts
    - Define Base Funds/Indexes
  - Account Value Deductions
    - % of Subaccounts
    - Fixed Dollar
    - % of Premium
- Income
  - Annuitization
  - GIB
    - Features
    - Charge Rates (Selected)
    - Fund Crediting Rates
    - Base Payout =
- Riders

← Prev. Topic | All Results | to App | Next Topic →

### Guaranteed Withdrawal Rider Charge Rates (%)

All rates below are for Issue Age 47 and Retirement Age 67

ID	Description	Accum. Phase	Income Phase
ALL	ALL Subaccounts	<input checked="" type="checkbox"/> 1	<input checked="" type="checkbox"/> 1

Check the box  if the Rates are the same for all years.

← Prev. Topic | Next Topic →

Where rates are same for each subaccount.

Next click on "Fund Crediting Rates" to enter the crediting rates for the GIB shadow fund whose crediting rates are a constant 5% for each year.

PRIMA™ Contract Editor | Editing: 2a. Variable with GLWB | Evaluation Date: 07/01/2026

From Provider

- Basics
- Features
- Accumulation Fund
  - Subaccounts
    - Define Base Funds/Indexes
  - Account Value Deductions
    - % of Subaccounts
    - Fixed Dollar
    - % of Premium
- Income
  - Annuitization
  - GIB
    - Features
    - Charge Rates
    - Fund Crediting Rates**
- + Base Payout =
- Riders

← Prev. Topic | [to App](#) | Next Topic →

### GIB Fund Crediting Rates

Rates are Compounded

ID or Group	Name of Group or Subaccount	Rates
ALL	ALL Subaccounts	<input checked="" type="checkbox"/> 5

If the Rates are the same for all Policy Years

← Prev. Topic | Next Topic →

Next Click on Base Payout then Basis X

PRIMA™ Contract Editor | Editing: 2a. Variable with GLWB | Evaluation Date: 07/01/2026

Features

- Accumulation Fund
  - Subaccounts
    - Define Base Funds/Indexes
  - Account Value Deductions
    - % of Subaccounts
    - Fixed Dollar
    - % of Premium
- Income
  - Annuitization
  - GIB
    - Features
    - Charge Rates
    - Fund Crediting Rates
    - + Base Payout =**
- Riders
- + From Participant
- + Reports

← Prev. Topic | [to App](#) | Next Topic →

### GIB Payouts

Effective Payout Amount (\$) = Basis (\$) × Payout Rates (%) × Modifiers (%)

Basis may also be increased by Account Value Lock-Ins.

← Prev. Topic | Next Topic →

PRIMA™ Contract Editor | Editing: 2a. Variable with GLWB | Evaluation Date: 07/01/2026

Features

- Accumulation Fund
  - Subaccounts
    - Define Base Funds/Indexes
  - Account Value Deductions
    - % of Subaccounts
    - Fixed Dollar
    - % of Premium
- Income
  - Annuitization
  - GIB
    - Features
    - Charge Rates
    - Fund Crediting Rates
    - Base Payout =
    - Basis X**
    - Payout Rates
- Riders

← Prev. Topic | [to App](#) | Next Topic →

### GIB Rider Basis

At any time, the Income Base Amount may be the value of a single fund (e.g., the Account Value), or the highest of several fund values. Below, please indicate WHICH funds participate in this Maximum.

Settings below are the same for ALL Attained Ages

Age at Retirement (Pol Yr End)	Account Value	GIB Fund	Locked-In Minimum Acct Value	Net Deposits	CPI Fund	Warnings
ALL AGES:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

Note: In each row, at least one of the check boxes must be checked.

← Prev. Topic | Next Topic →

Here Funds for the GIB payments are based on the greatest of: Account Value, GIB Shadow Fund, Net Deposits, and the CPI Fund

Next, Click on Payout Rates

The screenshot shows the PRIMA Contract Editor interface. The top bar indicates 'Editing: 2a. Variable with GLWB' and 'Evaluation Date: 07/01/2026'. The left sidebar is expanded to 'Payout Rates'. The main content area shows 'Guaranteed Withdrawal Income Parameters by Retirement Age'. A modal window is open for 'Single Guaranteed Withdrawal Parameters by Retirement Age' with the following table:

Age at Retirement	Policy Year	Payout Rate (% of Fund)
67	23	7

Next, Click on "Riders"

The screenshot shows the PRIMA Contract Editor interface. The top bar indicates 'Editing: 2a. Variable with GLWB' and 'Evaluation Date: 07/01/2026'. The left sidebar is expanded to 'Riders'. The main content area shows 'Total Charge Rates (%) for All Non-GLIB Riders'. The table below is as follows:

Accum. Phase	Income Phase
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

However, no other Rider charges are defined so that's the end of the Product Definitions.

Next, we'll look at defining the Participant-Specific data. Combined with the above **Product Definitions**, this will allow you to define the **instance** of a participant's data needed for evaluating a contract.

So, collapse Product Definitions then click on

From Participant:

The screenshot shows the PRIMA Contract Editor interface. The top navigation bar includes the title 'PRIMA™ Contract Editor', the editing mode '2a. Variable with GLWB', and the evaluation date '07/01/2026'. On the left, a sidebar lists 'Minimum Info Required' with sub-items: 'From Provider', 'From Participant' (highlighted), and 'Reports'. The main content area is titled 'Define the Contract' and contains the following text:

Unless this data is automatically provided by the plan, it must be entered manually.

The data inputs required must be current, such as planned contributions, fund/subaccount balances, and any future rebalancing.

The data can usually be found in your most recent statements, or obtained from the Plan's Administrators, or from Providers.

Navigation buttons include 'Prev. Topic' and 'Next Topic' on both sides, and a green 'to App' button in the top right corner.

Then, click on Contract Basics:

The screenshot shows the PRIMA Contract Editor interface with the 'Contract Basics' screen selected. The top navigation bar is the same as in the previous screenshot. The left sidebar now shows 'Contract Basics' selected under 'From Participant', with sub-items: 'Balances and Values', 'Accumulation Fund', 'Subaccounts', and 'Additional Fees'. The main content area is titled 'Contract Basics' and contains the following information:

**Contract was Issued on:** 07/01/2026

**Tax-Qualification Status:** Tax-Qualified (Traditional)

**Is Contract currently paying out via a Guaranteed Withdrawal Benefit (GWB)?** No.

**Available Retirement Ages:** 67 thru 67 (see Product Features)

**Target Retirement Age:** 67      **Effective Retirement Date:** 07/01/2046

There is a 'Your Notes and Comments' section with a text area containing 'Your notes here'. Navigation buttons include 'Prev. Topic' and 'Next Topic' on both sides, and a green 'to App' button in the top right corner.

As it's not in Payout, next, click on Balances and Values

PRIMA™ Contract Editor    Editing: 2a. Variable with GLWB    Evaluation Date: 07/01/2026    All Results ▶

← Prev. Topic    Next Topic →

### Enter Current Balances and Values

Total from Sub-accounts (\$):	\$0.00
Account Value (\$):	\$0.00
CPI Fund Value (\$):	_____ 0 (optional)
GIB Fund Balance (\$):	_____ 0

Bonus Amount credited At Issue (\$):	_____ 0
Minimum Guaranteed Death Benefit (MGDB) (\$):	_____ 0

#### Contributions and Withdrawals to Date

Scope	Contributions
Current contract term only	_____ 0
Since issue	_____ 0

← Prev. Topic    Next Topic →

Next, click on **Accumulation Fund**

PRIMA™ Contract Editor    Editing: 2a. Variable with GLWB    Evaluation Date: 07/01/2026    All Results ▶

← Prev. Topic    Next Topic →

## Accumulation Fund

Also called the Account Value.

Your entries here will let PRIMA™ project future balances for this Contract's sub-accounts. This topic includes these general areas:

1. Current Sub-account Balances
2. Future Contributions, allocated (by percentage) to sub-accounts

← Prev. Topic    Next Topic →

Next, expand '**Accumulation Fund**' to enter current balances

Subaccounts

Next expand to enter the current balances for the subaccounts and the corresponding Shadow Funds, if any

Variable Subaccounts

ID	Fund Name	Current Balance (\$)	GIB Fund Balance (\$)	Delete Row	Referenced by
V-6	S&P 500	0			

Next, click on 'Contributions' to enter percentage allocations, if any needed

## Contributions – Pro-Rata or Percentage Allocations

The screenshot shows the PRIMA Contract Editor interface. The top navigation bar includes the menu icon, 'PRIMA™ Contract Editor', 'Editing: 2a. Variable with GLWB', 'Evaluation Date: 07/01/2026', and 'All Results ▶'. A green 'to App' button is in the top right. The left sidebar contains a tree view with categories: Minimum Info Required, From Provider, From Participant (with sub-items: Basics, Balances and Values), Accumulation Fund (with sub-items: Subaccounts, Balances, Variable), Contributions (highlighted), Additional Fees, and Reports. The main content area is titled 'Allocate Contract's Contributions to Sub-Accounts'. It features 'Prev. Topic' and 'Next Topic' navigation buttons at the top. Below the title, there is a checkbox for 'Always Allocate Pro-Rata: '. To the right, 'Contribution Dates' are shown as 'From: 07/01/2026' and 'Thru: 06/01/2046', and 'Issue Date' is '07/01/2026' with 'Age: 47'. Another set of 'Prev. Topic' and 'Next Topic' buttons is at the bottom.

Next click on Additional Fees

## Additional Fees

The screenshot shows the PRIMA Contract Editor interface with the 'Additional Fees' screen selected. The top navigation bar is identical to the previous screenshot. The left sidebar now has 'Additional Fees' highlighted, with a sub-item 'Percent of Account Value' visible below it. The main content area is titled 'Additional Fees' and contains the text: 'Covers any additional fees not known to the Provider, as defined in the Product section'. Navigation buttons for 'Prev. Topic' and 'Next Topic' are present at the top and bottom of the main content area.

Next, click on **Percent of Account Value**. There are none

The screenshot displays the PRIMA Contract Editor interface. The top navigation bar includes the title 'PRIMA™ Contract Editor', the current editing state 'Editing: 2a. Variable with GLWB', and the 'Evaluation Date: 07/01/2026'. On the right side of the header, there are buttons for 'All Results' and 'to App'. A left-hand sidebar contains a tree view of contract sections: 'Minimum Info Required', 'From Provider', 'From Participant', 'Accumulation Fund', 'Subaccounts', 'Balances', 'Variable', 'Contributions', 'Additional Fees', 'Percent of Account Value', and 'Reports'. The 'Additional Fees' section is currently selected and highlighted in blue. The main content area is titled 'Additional Fees: % of Total Account Value' and contains the instruction: 'Enter any additional fees not known to the Provider, as defined in the Product section.' Below this instruction, there is a checkbox labeled 'Rate is the same for all years:' which is checked, followed by a text input field labeled 'Enter Rate:' with a value of '0'. Navigation buttons for 'Prev. Topic' and 'Next Topic' are located above and below the main content area.

There are none and that's the end of all definitions needed for evaluation so we will proceed to how we can evaluate this line-item and the portfolio as a whole.

# Running Evaluations

PRIMA accommodates Evaluations and Audits at 2 Levels:

1. Individual Line-Item
2. Portfolio (all Line-Items combined)

## 1. Individual Line-Item

## 2. Portfolio (all Line-Items combined)

But, before we get to running evaluations, we will first need to set up our options for these runs.

First, Select Single or Joint and various options for All Evaluation Runs

## Evaluating an Individual Line-Item

To conduct a Line-Item Evaluation, go to 'Workbench/Contents' to get its portfolio

The screenshot shows the 'Workbench Portfolio Components' table in the PRIMA-FIRST v2.51.0 interface. The table lists various investment products with columns for 'Include in Portfolio', 'Product Type', 'Product Name', 'Issue Date', 'Balance @ Eval Date', 'Edit', 'Evaluate', 'Copy', 'Product ID', and 'Delete'. The 'Evaluate' column contains icons for each row. The 'Variable' row (2a. Variable with GLWB) is highlighted in blue, indicating it is selected for evaluation.

Include in Portfolio	Product Type	Product Name	Issue Date	Balance @ Eval Date	Edit	Evaluate	Copy	Product ID	Delete
<input checked="" type="checkbox"/>	Investments	1. Mutual Fund - S&P 500	07/01/2026	0					
<input checked="" type="checkbox"/>	Variable	2a. Variable with GLWB	07/01/2026	0					
<input type="checkbox"/>	Variable	2b. Variable with Granularity	07/01/2026	0					
<input type="checkbox"/>	Fixed	3a. Fixed - Mkt	07/01/2026	0					
<input type="checkbox"/>	Fixed	3b. Fixed, Constant	07/01/2026	0					
<input type="checkbox"/>	Indexed	4a. Indexed - APTP	07/01/2026	0					
<input type="checkbox"/>	Indexed	4b. Indexed - MAVG	07/01/2026	0					
<input type="checkbox"/>	Indexed	4c. Indexed - MPTP	07/01/2026	0					
<input type="checkbox"/>	RILA	5a. RILA - Buffer	07/01/2026	0					
<input type="checkbox"/>	RILA	5b. RILA - Floor	07/01/2026	0					
<input type="checkbox"/>	FILA	6. FILA	07/01/2026	0					
<input type="checkbox"/>	DIA	7. DIA	07/01/2026	100000					
<input type="checkbox"/>	Variable	8. In GWB Payout (Variable)	07/01/2026	100000					

Let's pick **Variable**, then simply click on its 'Evaluate' icon

The screenshot shows the 'Requesting a Report' dialog box. The left pane is titled 'Select and Inspect one Specific Scenario' and contains various options for report generation, such as 'Choose Scenario by: Percentile Rank', 'Checkboxes: Check All Below', 'Also Include: High-Level Summary', 'Accumulation-Phase Projections: Net Deposits, GIB Fund', 'Accumulation-Phase AVs: Total, Daily', 'Income-Phase AVs (Single): Total, Daily', 'Income Payments (Single): GIB, Annuitization', and 'ITM Reports:'. The right pane shows the report details: 'Description: ANN-2 - Russell 2000 (Indexed Fund)', 'Portfolio: Workbench', 'Report Type: Inspect User-selected Details', 'Contract: 1. Variable', 'Calculation Mode: PRIMA™ (Evaluation) Single-life', and progress indicators for 'Performing Contract Sanity Checks...', 'Overriding Planned Contributions...', 'All Contributions go to this Line Item (for this Report only)', 'Preparing Request...', and 'Sending Request...'. The bottom of the dialog shows 'Report Title: ANN-2 - Russell 2000 (Indexed Fund)' and '# of Scenarios: 101 / 1,001'.

You can pick which audit reports you wish to produce and the individual scenario you wish to audit  
 Then simply click on 101 or 1,001 scenarios to start the evaluation that will produce the audit reports and charts

When completed, click on **'Continue'** then **'Completed Results'** to get the Evaluations and its Audits

Completed Results – Reports, Histograms and Charts

**PRIMA-FIRST™ v2.51.0** Participant: Smith, Joan Evaluation Date: 07/01/2026 by InjAnnuity

**Main Menu**

- Evaluation Date
- Participant
- Portfolios**
  - Current
  - Workbench
    - Taxes
    - Longevity
    - Contributions
    - Retirement Goals
    - Parameters for Runs
  - Components
  - Evaluate Portfolio
- All Results

**Results from Portfolio(s)**

Completed	Portfolio	#Scens	Scope	Lives	Metric	Line Item(s)	Product(s)	Description	Reports	Charts	Notes	Delete
02/27/2026 @ 03:58 PM	Workbench	101	Portfolio	S	ITM	2 Items	I A	PORTFOLIO - VDA + MF	[Report]	[Chart]	[Note]	[Delete]
02/27/2026 @ 03:58 PM	Workbench	101	Line Item	S	ITM	2a. Variable with GLWB	A	ANN-1 VDA w/CPI-GWB - S&P 500	[Report]	[Chart]	[Note]	[Delete]
02/27/2026 @ 03:58 PM	Workbench	101	Line Item	S	ITM	1. Mutual Fund - S&P 500	I	INV-1 S&P 500	[Report]	[Chart]	[Note]	[Delete]

Check Pending Last Update: Mar 05 2026 11:50 AM Delete ALL

Simply click on Reports or Charts to get the ITM (In-The-Money) Reports, Charts and Histograms

**Report Viewer** Text Size: - + This Report...

Results are NOT a guarantee of Future Performance and should only be used for informational purposes only.

Report 2 Page 1 2. Mutual Fund S&P -- R  
 Run 06/27/2025 at 03:49 pm (US Eastern Time) for Project ALL PH9825 - 1  
 1001 SCENARIOS - ITMness for retire

Pct Econ.	PV Income & Withdrawals	Acct. Val + PV Contribs.	ITMness = C/D - 1	Income
A_ B_ C_ D_ E_ F_				
MDN 80	77,858.54	248,977.89	-67.69%	ISV
1 820	112,257.80	248,168.33	-53.20%	ISV
2 868	135,975.46	248,402.80	-43.43%	ISV
3 827	143,585.48	248,677.37	-48.37%	ISV
4 305	148,782.49	239,795.74	-37.99%	ISV
5 169	157,463.85	249,315.98	-34.53%	ISV
6 478	161,895.78	238,887.31	-32.88%	ISV
7 973	176,541.25	248,133.60	-28.98%	ISV
8 797	176,622.50	239,978.37	-26.48%	ISV
9 147	184,823.88	238,514.86	-22.51%	ISV
10 36	189,158.17	239,546.88	-21.83%	ISV

**Likelihood of Positive Futures**

93.1% (Pie Chart)

Frequency (%) vs In-the-moneyness (%) Histogram

Frequency (%) vs In-the-moneyness (%) CDF Chart

Pos (%) Neg (%) ALL (%) Vertical Bar Charts

Participant	ITM	Pos(%)	Neg(%)	ALL(%)
Worst	2.26%	-19.33%	-19.33%	
Median (+)	96.03%	-5.95%	86.46%	
Mean (+)	93.32%	-5.17%	168.85%	
Best	892.44%	-9.93%	892.44%	

Participant: Smith, Joan T  
 Portfolio Type: Workbench  
 # of Economic Futures Used: 101 of 101  
 Evaluation Metric: ITM  
 Run Completed On: 09/16/2025 @ 11:12 AM  
 Line Item: A1 ANN-1 VDA w/CPI-GWB - S&P 500  
 Report Title: ANN-1 VDA w/CPI-GWB - S&P 500

Next, enter Parameters for “Adequacy of Projected Retirement Income” reports and charts

**PRIMA-FIRST™ v2.51.0** Participant: Smith, Joan Evaluation Date: 07/01/2026 by InjAnnuity

**Retirement Goals: Expenditures** for retirement after age 67

For the Adequate Income Metric (AIM)

Enter Estimated Monthly Retirement Expenditures to be covered by this Portfolio:

These Expenditures<sup>1</sup> are the same for all ages:  Enter \$/month: 1500

<sup>1</sup> Enter in terms of today's costs and prices. PRIMA will adjust these for future inflation.

Participant's Post-Retirement Parameters:

Estimated Credit Rating: Average

Risk Tolerance is: (C) Average

Investment Fees (%): 0.5

Before we click on ‘Evaluate Portfolio’ we need to return to the portfolio to select which Line-Items to include in the run

**PRIMA-FIRST™ v2.51.0** Participant: Smith, Joan Evaluation Date: 07/01/2026 by InjAnnuity

**Workbench Portfolio Components**

Include in Portfolio	Product Type	Product Name	Issue Date	Balance @Eval Date	Edit	Evaluate	Copy	Product ID	Delete
<input checked="" type="checkbox"/>	Investments	1. Mutual Fund - S&P 500	07/01/2026	0	<input type="button" value="Edit"/>	<input type="button" value="Evaluate"/>	<input type="button" value="Copy"/>		<input type="button" value="Delete"/>
<input checked="" type="checkbox"/>	Variable	2a. Variable with GLWB	07/01/2026	0	<input type="button" value="Edit"/>	<input type="button" value="Evaluate"/>	<input type="button" value="Copy"/>		<input type="button" value="Delete"/>
<input type="checkbox"/>	Variable	2b. Variable with Granularity	07/01/2026	0	<input type="button" value="Edit"/>	<input type="button" value="Evaluate"/>	<input type="button" value="Copy"/>		<input type="button" value="Delete"/>
<input type="checkbox"/>	Fixed	3a. Fixed - Mkt	07/01/2026	0	<input type="button" value="Edit"/>	<input type="button" value="Evaluate"/>	<input type="button" value="Copy"/>		<input type="button" value="Delete"/>
<input type="checkbox"/>	Fixed	3b. Fixed, Constant	07/01/2026	0	<input type="button" value="Edit"/>	<input type="button" value="Evaluate"/>	<input type="button" value="Copy"/>		<input type="button" value="Delete"/>
<input type="checkbox"/>	Indexed	4a. Indexed - APTP	07/01/2026	0	<input type="button" value="Edit"/>	<input type="button" value="Evaluate"/>	<input type="button" value="Copy"/>		<input type="button" value="Delete"/>
<input type="checkbox"/>	Indexed	4b. Indexed - MAVG	07/01/2026	0	<input type="button" value="Edit"/>	<input type="button" value="Evaluate"/>	<input type="button" value="Copy"/>		<input type="button" value="Delete"/>
<input type="checkbox"/>	Indexed	4c. Indexed - MPTP	07/01/2026	0	<input type="button" value="Edit"/>	<input type="button" value="Evaluate"/>	<input type="button" value="Copy"/>		<input type="button" value="Delete"/>
<input type="checkbox"/>	RILA	5a. RILA - Buffer	07/01/2026	0	<input type="button" value="Edit"/>	<input type="button" value="Evaluate"/>	<input type="button" value="Copy"/>		<input type="button" value="Delete"/>
<input type="checkbox"/>	RILA	5b. RILA - Floor	07/01/2026	0	<input type="button" value="Edit"/>	<input type="button" value="Evaluate"/>	<input type="button" value="Copy"/>		<input type="button" value="Delete"/>
<input type="checkbox"/>	FILA	6. FILA	07/01/2026	0	<input type="button" value="Edit"/>	<input type="button" value="Evaluate"/>	<input type="button" value="Copy"/>		<input type="button" value="Delete"/>
<input type="checkbox"/>	DIA	7. DIA	07/01/2026	1000000	<input type="button" value="Edit"/>	<input type="button" value="Evaluate"/>	<input type="button" value="Copy"/>		<input type="button" value="Delete"/>
<input type="checkbox"/>	Variable	8. In GWB Payout (Variable)	07/01/2026	1000000	<input type="button" value="Edit"/>	<input type="button" value="Evaluate"/>	<input type="button" value="Copy"/>		<input type="button" value="Delete"/>

**Note:** After a change to any of the above dates or dollar amounts, you must review all related data, to ensure that it is fully consistent with these new values.

Next, select which line-items to include in the run where ‘Variable’ and ‘Investments’, are selected for inclusion in the Portfolio run

Then we allocate how the contributions should be split between **'Investments'** (Mutual Fund) and **'Variable'**. Here, it's 60/40.

PRIMA-FIRST™ v2.51.0 Participant: Smith, Joan Evaluation Date: 07/01/2026 by InjAnnuity

Main Menu

- Evaluation Date
- Participant
- ▼ Portfolios
  - Current
  - ▼ Workbench
    - ▼ Assumptions
      - Taxes
      - Longevity
      - Contributions
      - Retirement Goals
      - Parameters for Runs
    - Components
    - Evaluate Portfolio

- All Results

Planned Contributions

Topics

- Introduction
- Contribution Dates
- Contribution Amounts
- % Allocations to Product Types

% Allocations to Product Types

Contributions from 07/01/2026 thru 06/01/2046

For the months between dates: Maintain Specified Contribution ratios

Allocations (%) to:	Mutual Fund	Variable	Fixed	Fixed Indexed	RILA	FILA	DIA	TOTAL (%)
Starting:								Must total 100%
07/01/2026	60	40	0	0	0	0	0	100.000%

# of Selected Portfolio Line Items accepting Contributions on/after the Effective Date: 0 1  
2 or more

Sanity Checks apply to all Contributions on and after the Evaluation Date.  
On Save, redundant rows will be dropped.

Now, we're ready to run the evaluation, so next, we click on **Evaluate Portfolio** to generate results for the ITM Metric by clicking on 101 or 1,001 scenarios

PRIMA-FIRST™ v2.51.0 Participant: Smith, Joan Evaluation Date: 07/01/2026 by InjAnnuity

Main Menu

- Evaluation Date
- Participant
- ▼ Portfolios
  - Current
  - ▼ Workbench
    - ▼ Assumptions
      - Taxes
      - Longevity
      - Contributions
      - Retirement Goals
      - Parameters for Runs
    - Components
    - Evaluate Portfolio
- All Results

Evaluate Workbench Portfolio (your Selected Components only)

Evaluation is for: ● In-the-Moneyess (ITM) ○ Adequate Income Metrics (AIM)

For Percentiles:  MIN  17  33  50  67

Run the Evaluation Report

Name of Run: PORTFOLIO - VDA + MF

Include Detailed Audits

Run using: 101 1,001 Scenarios

Requesting an Illustration

Description: Portfolio Reports  
Portfolio: Workbench  
Report Type: Portfolio's Total Income  
Calculation Mode: PRIMA™ (Evaluation) Single-life

- Processing Planned Contributions...
- Collecting Contract Details...
- Checking Contracts for Participant Updates...
- Performing Contract Sanity Checks...
- Processing Contracts...
- Sending Request...

Check your Completed Results shortly.

Continue

When completed, click on **Continue** then **Completed Results**

The two evaluation metrics produced by the app are:

- **ITM %:** A positive ITM occurs when returns, net of fees, outperform inflation
- **AIM %:** Measures a portfolio's ability to cover its allotment of expected retirement expenditures

## Formulas

- **ITM %** =  $100 * ((PV \text{ Income} / (\text{Acct. Value} + PV \text{ Future Contributions})) - 1)$
- **AIM %** =  $100 * (PV \text{ Ending Balance} / PV \text{ retirement expenditures})$  where Ending Balance is the balance @ death, of all projected income less target retirement expenditures

Both metrics are discounted use projected CPI rates.

### Risk - Reward

For any evaluation, participants should make their choice based on their answers to these questions:

- Which metric is more important to them: ITM or AIM?
- Are they more attracted by the upside?
- Are they more concerned by the downside?
- How much of the negative slice of the pie are they willing to tolerate?
- How much of the positive slice of the pie is needed to attract them?
- Is the income-base, used to determine if income payments are adequately protected?
- Is retirement income adequately protected?
- If important to them, does the portfolio have adequate liquidity and/or Death Benefits?

### Customizing the Basic Boilerplate Contract

Now that you can see how PRIMA-ONE™ works with its boilerplate contracts, you have a good starting point for customizing the sample contracts so that you can make the necessary changes to reflect the options and features of *your* contracts. So, let's look at what you will need to do if you have a reasonably vanilla policy. If it's not vanilla, we'll still go ahead with it but update it later for the more unusual stuff and treat this as a first approximation.

***It's recommended that you divide your work into 3 main tasks (cycle) in the following order:***

1. Enter additional Contract Data and Rules
2. Get Results and Inspect the reports
3. Correct any input errors and repeat the cycle until it's correct

### 1. Enter your Contract's Data and Rules

Your contract will have different attributes from the PRIMA-ONE™ default boilerplate contract and most likely will be in the following areas:

- Account Value Sub-Account Balances and Classifications
- Account Value Charges and Fees
- Rider Charges

- GIB Fund

So, let's look at how you would go about updating the data for these categories so that we can transform the existing boilerplate contract into one that best defines your contract.

A. Account Value Sub-Account Balances and Classifications

If you don't have a breakdown of these balances, as of the evaluation date, then you'll need to contact the Insurance company to get them.

The NAIC and American Academy of Actuaries have provided 10 Asset Classifications for use by Insurance companies and it's these classifications that are used in the app. However, each Insurance Company will probably be using the labels used by the separate Mutual Funds. However, for Statutory purposes they are required to re-classify them in this manner, so they should be able to provide you with this information.

So, let's get some initial results and see if they are consistent with your contract definitions. Keep doing this until you're satisfied that the results for the entered Economic Scenario are consistent with what's in your contract.

2. Get Line-Item Results and Inspect the Reports for the Variable Contract

Projected Account for All subaccounts

Report 3 Page 1 2a. Variable with GLWB -- Female, aged 47, Issue Age 47 PAGE 3  
 Run 03/11/2026 at 04:30 pm (US Eastern Time) for Projection Starting 07/01/2026, Issued 07/01/2026 - BASIS IS NET  
 INCOME PHASE (ISW) - Accum. Fund(SINGLE, Elected @ Age 67) - By All Sub-Accounts Combined  
 User-Entered Economic Scenario is #50

BOY	BOY Fund	Annualized Intr. %	Interest Credited	Fees & Charges	Contributions	EOY Annual Withdrawals	Fund EOY	EOY Age(s)	Fund(s)
A	B	C	D	E	F	G	H	I	J
1	0.00	7.1440687	145.85	-33.38	4,800.00		4,912.47	48	ALL
2	4,912.47	-19.5031222	-1,377.36	-84.98	5,040.00		8,490.13	49	ALL
3	8,490.13	12.6628803	1,392.03	-148.11	5,040.00		14,774.05	50	ALL
4	14,774.05	37.8273747	6,547.77	-254.70	5,040.00		26,107.12	51	ALL
5	26,107.12	-10.2277230	-3,033.98	-349.72	5,484.00		28,207.42	52	ALL
6	28,207.42	21.4650548	6,648.92	-429.71	5,640.00		40,066.63	53	ALL
7	40,066.63	16.2400922	6,791.12	-600.33	6,012.00		52,269.42	54	ALL
8	52,269.42	15.9680104	9,030.52	-732.43	6,132.00		66,699.50	55	ALL
9	66,699.50	6.1697641	4,592.51	-856.77	6,132.00		76,567.24	56	ALL
10	76,567.24	2.7772348	2,615.08	-955.45	6,936.00		85,162.88	57	ALL
11	85,162.88	-3.6151597	-3,335.02	-1,122.76	7,188.00		87,893.09	58	ALL
12	87,893.09	34.4333753	31,505.61	-1,307.73	7,416.00		125,506.97	59	ALL
13	125,506.97	-11.3219838	-14,841.67	-1,600.61	7,716.00		116,780.69	60	ALL
14	116,780.69	-0.6471202	-726.79	-1,496.50	8,016.00		122,573.40	61	ALL
15	122,573.40	-6.5070875	-8,110.89	-1,525.49	8,244.00		121,181.01	62	ALL
16	121,181.01	-4.3283422	-5,424.94	-1,538.70	8,544.00		122,761.37	63	ALL
17	122,761.37	29.1469761	36,845.29	-1,818.58	8,772.00		166,560.08	64	ALL
18	166,560.08	2.4212414	4,154.46	-2,154.25	9,036.00		177,596.29	65	ALL
19	177,596.29	32.3055329	58,769.86	-2,551.95	9,360.00		243,174.20	66	ALL
20	243,174.20	1.5120067	3,832.69	-3,073.91	9,360.00		253,292.98	67	ALL
EOY	START	OWB				-17,730.51	235,562.47	67	
21	235,562.47	7.2753189	17,034.29	-3,048.82		-17,730.51	231,817.43	68	ALL
22	231,817.43	1.3104594	3,045.84	-2,937.80		-17,730.51	214,194.96	69	ALL
23	214,194.96	15.9855817	33,936.60	-2,795.54		-17,730.51	227,605.51	70	ALL

Projected Contributions (Accumulation Phase)

Results are NOT a Guarantee of Future Performance and should only be used for independent neutral evaluations

Report 7 Page 1 2a. Variable with GLWB -- Female, aged 47, Issue Age 47 PAGE 7  
 Run 03/11/2026 at 04:30 pm (US Eastern Time) for Projection Starting 07/01/2026, Issued 07/01/2026 - BASIS IS NET  
 ACCUMULATION PHASE - Fund is Contributions Less Withdrawals  
 User-Entered Economic Scenario is #50

BOY	BOY Fund	Simple Ann. Intr. %	Interest Credited	Fees & Charges	Contributions	EOY Annual Withdrawals	Fund EOY	EOY Age(s)	Fund(s)
A	B	C	D	E	F	G	H	I	J
1	0.00	0.0000000	0.00		4,800.00		4,800.00	48	ALL
2	4,800.00	0.0000000	0.00		5,040.00		9,840.00	49	ALL
3	9,840.00	0.0000000	0.00		5,040.00		14,880.00	50	ALL
4	14,880.00	0.0000000	0.00		5,040.00		19,920.00	51	ALL
5	19,920.00	0.0000000	0.00		5,484.00		25,404.00	52	ALL
6	25,404.00	0.0000000	0.00		5,640.00		31,044.00	53	ALL
7	31,044.00	0.0000000	0.00		6,012.00		37,056.00	54	ALL
8	37,056.00	0.0000000	0.00		6,132.00		43,188.00	55	ALL
9	43,188.00	0.0000000	0.00		6,132.00		49,320.00	56	ALL
10	49,320.00	0.0000000	0.00		6,936.00		56,256.00	57	ALL
11	56,256.00	0.0000000	0.00		7,188.00		63,444.00	58	ALL
12	63,444.00	0.0000000	0.00		7,416.00		70,860.00	59	ALL
13	70,860.00	0.0000000	0.00		7,716.00		78,576.00	60	ALL
14	78,576.00	0.0000000	0.00		8,016.00		86,592.00	61	ALL
15	86,592.00	0.0000000	0.00		8,244.00		94,836.00	62	ALL

Projected Guaranteed Income Fund (GIB)

Results are NOT a Guarantee of Future Performance and should only be used for independent neutral evaluations

Report 8 Page 1 2a. Variable with GLWB -- Female, aged 47, Issue Age 47 PAGE 8  
 Run 03/11/2026 at 04:30 pm (US Eastern Time) for Projection Starting 07/01/2026, Issued 07/01/2026 - BASIS IS NET  
 ACCUMULATION PHASE - Fund is Guaranteed Income Fund (GIB)  
 User-Entered Economic Scenario is #50

BOY	BOY Fund	Annualized Intr. %	Interest Credited	Fees & Charges	Contributions	EOY Annual Withdrawals	Fund EOY	EOY Age(s)	Fund(s)
A	B	C	D	E	F	G	H	I	J
1	0.00	5.0000000	128.56		4,800.00		4,928.56	48	ALL
2	4,928.56	5.0000000	381.51		5,040.00		10,350.07	49	ALL
3	10,350.07	5.0000000	652.49		5,040.00		16,042.57	50	ALL
4	16,042.57	5.0000000	937.12		5,040.00		22,019.69	51	ALL
5	22,019.69	5.0000000	1,247.87		5,484.00		28,751.55	52	ALL
6	28,751.55	5.0000000	1,588.74		5,640.00		35,980.29	53	ALL
7	35,980.29	5.0000000	1,960.04		6,012.00		43,952.33	54	ALL
8	43,952.33	5.0000000	2,361.86		6,132.00		52,446.19	55	ALL
9	52,446.19	5.0000000	2,786.55		6,132.00		61,364.74	56	ALL
10	61,364.74	5.0000000	3,254.13		6,936.00		71,554.87	57	ALL
11	71,554.87	5.0000000	3,770.27		7,188.00		82,513.14	58	ALL
12	82,513.14	5.0000000	4,324.29		7,416.00		94,253.42	59	ALL
13	94,253.42	5.0000000	4,919.34		7,716.00		106,888.76	60	ALL
14	106,888.76	5.0000000	5,559.28		8,016.00		120,464.04	61	ALL

## Index of Reports

Results are NOT a Guarantee of Future Performance and should only be used for independent neutral evaluations

2a. Variable with GLWB -- Female, aged 47, Issue Age 47

PAGE 13

INDEX OF REPORTS

Report Number & Name	Scenario	REPORT CODE	START PAGE
	EOY Number		
A-----	B__	C-----	D-----
1. ALL PHASES - Contract Evaluation		ALL	A-000021 1
2. ALL PHASES - 101 Percentiles		ALL	A-000041 2
3. INCOME PHASE (ISW) - Accum. Fund(SINGLE, Elected @ Age 67) - By All Sub-Accounts Combined	20	50	I-SG01201 3
4. INCOME PHASE (ISW) - PV Gtd. Withdrawal Pmts.(SINGLE, Elected @ Age 67)	20	50	I-SG0001 4
5. INCOME PHASE (ISW) - Withdrawal Pmts. in Today's \$ (CPI)(SINGLE, Elected @ Age 67)	20	50	I-SGT001 5
6. ACCUMULATION PHASE - Fund is Accum. Fund - By All Sub-Accounts Combined		50	D-0001201 6
7. ACCUMULATION PHASE - Fund is Contributions Less Withdrawals		50	D-000101 7
8. ACCUMULATION PHASE - Fund is Guaranteed Income Fund (GIB)		50	D-000501 8
9. ACCUMULATION PHASE - Fund is CPI Fund		50	D-000601 9
10. ALL PHASES - ITMness ANALYSIS for EOY 0, Age 47	0	50	D-000001 10
11. ALL PHASES - ITMness ANALYSIS - All Years		50	D-000001 11
12. GLOSSARY OF TERMS USED IN REPORTS		ALL	G-000001 12

### 3. Correct any input errors and repeat the cycle until correct

So, before we can move on, we must correct any errors and omissions in your inputs of the current Contract Data and Rules by thoroughly checking the common errors listed in the following categories.

- A. Account Value Sub-Account Balances and Classifications
  - a. Incorrect Balances
  - b. Incorrect Classifications
- B. Account Value Fees
  - a. Incorrect Fees
  - b. Double Dipping i.e., including rider charges with Fees and vice-versa
  - c. Fees change from year to year but are entered as constant
- C. Rider Charges
- D. GIB Fund
  - a. Incorrect Crediting Rates
  - b. Rates may change from year to year
  - c. Incorrect Starting Balance
  - d. Incorrect Rules for step-ups or lock-ins
  - e. Compound vs Simple Interest Crediting

**Also note below:**

Guaranteed Income Benefit (GIB)

**Basis:**

If the Guaranteed Income Rider payments can be based on a separate Shadow Fund floor, then you will need to enter its crediting rates.

GIB (Shadow)Fund

**Enter Crediting Rates**

The screenshot shows the PRIMA™ Contract Editor interface. The top navigation bar includes the title 'PRIMA™ Contract Editor', the editing context '2a. Variable with GLWB', the evaluation date '07/01/2026', and an 'All Results' button. The left sidebar contains a navigation menu with categories like 'Minimum Info Required', 'From Provider', 'Accumulation Fund', 'Income', 'Annuitization', 'GIB', and 'Base Payout ='. The 'Fund Crediting Rates' section is highlighted in the sidebar.

The main content area is titled 'GIB Fund Crediting Rates' and contains the following elements:

- A 'Prev. Topic' button on the left and a 'Next Topic' button on the right.
- A checkbox labeled 'Rates are Compounded' which is checked.
- A table with the following structure:
 

ID or Group	Name of Group or Subaccount	Rates
ALL	ALL Subaccounts	<input checked="" type="checkbox"/> 5
- A checkbox at the bottom labeled 'If the Rates are the same for all Policy Years' which is checked.
- 'Prev. Topic' and 'Next Topic' buttons at the bottom of the main content area.

Get Results and Inspect Reports

Now let's get the results.

However, the speed with which you will get results is a function of the number of scenarios. So, at the early stages we would recommend that you do **the initial testing with 101 scenarios**. In general, the patterns for 101 scenarios should be similar to the 1,001 but the absolute numbers will be less accurate. But this will allow you to get to your answer more quickly. Rapid testing of the strategies and explore 'What-ifs' at 101 scenarios will speed up the process before you move on to 1,001.

After you have got a good feel for things at the lower number of scenarios, you will want to get the final most accurate results using 1,001 scenarios and base your decisions on that level.

## So, get some results

Results are NOT a Guarantee of Future Performance and should only be used for independent neutral evaluations

2a. Variable with GLWB -- Female, aged 47, Issue Age 47 PAGE 13

Report Number & Name	INDEX OF REPORTS		Scenario	REPORT	START
	EOY	Number	Number	CODE	PAGE
A-----	B	C	D	E	
1. ALL PHASES - Contract Evaluation			ALL	A-000021	1
2. ALL PHASES - 101 Percentiles			ALL	A-000041	2
3. INCOME PHASE (ISW) - Accum. Fund(SINGLE, Elected @ Age 67) - By All Sub-Accounts Combined	20	50	I-S001201		3
4. INCOME PHASE (ISW) - PV Gtd. Withdrawal Pmts.(SINGLE, Elected @ Age 67)	20	50	I-S00001		4
5. INCOME PHASE (ISW) - Withdrawal Pmts. in Today's \$ (CPI)(SINGLE, Elected @ Age 67)	20	50	I-S0T001		5
6. ACCUMULATION PHASE - Fund is Accum. Fund - By All Sub-Accounts Combined			50	D-0001201	6
7. ACCUMULATION PHASE - Fund is Contributions Less Withdrawals			50	D-000101	7
8. ACCUMULATION PHASE - Fund is Guaranteed Income Fund (GIB)			50	D-000501	8
9. ACCUMULATION PHASE - Fund is CPI Fund			50	D-000001	9
10. ALL PHASES - ITMness ANALYSIS for EOY 0, Age 47	0	50	D-000001		10
11. ALL PHASES - ITMness ANALYSIS - All Years			50	D-000001	11
12. GLOSSARY OF TERMS USED IN REPORTS			ALL	G-000001	12

### Inspect & Verify the Results from 1st Principles by Scenario or Percentile

There's a lot of calculations going on, not to mention times thousands of Scenarios. However, the app is not a black box. Every single number, in every single Scenario, that the app produces can be inspected, and their calculations can be derived from first principles for audit purposes.

### Inspection Window

PRIMA™ Contract Editor
Editing: 2a. Variable with GLWB    Evaluation Date: 07/01/2026
All Results ▶

← Prev. Topic
Next Topic →

**Select and Inspect one Specific Scenario**

**Choose Scenario by:** Scenario #  :  50

**Checkboxes:**  Check All Below     Uncheck All Below

**Also Include:**  Tax Reports     High-Level Summary     w/Percentile's Scenario#s

**Accumulation-Phase Projections:**  Net Deposits     GIB Fund

**Accumulation-Phase AVs:**  Total     by SubAcct     Daily

**Income-Phase GWB AVs (Single):**  Total     by SubAcct     Daily

**Income Payments (Single):**  GIB     Annuitization

**ITM Reports:**

Name of Run: ANN-1 VDA w/CPI-GWB - S&P 500
# of Scenarios: 101 1,001

← Prev. Topic
Next Topic →

The two Main Areas of Inspection are MACRO and MICRO. The MACRO is the sum of the MICROS and detailed inspection is mainly at the MICRO Level for a targeted Percentile's Scenario or an entered Scenario.

1. MACRO - Multi-Scenario Summaries Level
  - a. Evaluation of the Annuity as of Today
  - b. Important High-Level Statistics
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There are many ways to arrive at an answer but for any individual the answer is a function of their goals combined with the optimized utilization of available features and options in the contract.

[It all comes out in the wash](#)

At this point be prepared to spend some time reviewing what the contract allows you to do. For example, does the contract allow for a liberal transfer of funds between different investments. Do you have a Guaranteed Income Rider or Minimum Guaranteed Benefits?

Are you only concerned about payments you receive when you are alive?

Do you have a target age range for retirement? What is your risk appetite?

In other words, there's no one answer that fits everyone, as the returns on your investment must take all these factors into consideration and then crunch the numbers to come up with your individualized answer.

## Presenting Deferred Annuities – A Game-Changing Epiphany for Financial Advisors

### Background

Historically, Deferred Annuities have experienced a lot of bad press. You'll often see a comparison between a Mutual Fund with low fees versus a Variable Deferred Annuity (**VDA**) with higher charges, demonstrating how much more money an investor would have made with a low-fee Mutual Fund. This

is often demonstrated with a cherry-picked scenario that will always favor the Mutual Fund. However, a scenario where the markets perform poorly and where a DA's guaranteed income comes into play might provide a less rosy picture.

Nevertheless, this is not a fair comparison, because they're not "Apples and Apples", and hindsight is 20-20. Until now, there was nothing available to enable an FA to produce and present an accurate rebuttal. In our stochastic contract evaluations, using PRIMA™'s metrics, that are based on future estimated contract performance, some DAs ranked higher than low-fee Mutual Funds, even though the DA's charges were higher. That's mainly because PRIMA™ bases its DA evaluations on each participant's unique personal parameters and risk-appetites. In addition, it allows the user to test and compare many variations in order to optimize the contract's returns.

### PRIMA-ONE™, a Toolbox for Financial Advisors

A web-based tool, designed to assist Financial Advisors (**FAs**) in the evaluation, monitoring and presentation of DAs and Investments.

### Using PRIMA™

The Principals of InjAnnuity Inc. have been developing and selling Life and Annuity Actuarial Reserve Valuation Software Systems to major Life Insurance companies, since 1990.

PRIMA™ is a radical departure from these prior developments, in that, instead of focusing on an Insurance Company's point of view, it does so from the participant's point of view.

In doing so, it takes advantage of the participant's superior personal knowledge of their current health, expected longevity, goals, preferences, tax-bracket and risk-appetites; information that is generally unavailable to the Insurance Company. Combined with stochastically generated future economic conditions. PRIMA™ takes all these parameters into consideration, to arrive at an accurate evaluation of a potential or existing DA contracts.

The importance of a participant's personal parameters has resulted in the creation of a new set of methods and paradigms, and, in addition, has required the use of stochastic methods to implement them correctly. The results are often quite unexpected and generally contain positive evaluation outcomes.

The app provides a user-friendly front-end where the FA can define a DA contract and its features, and model other important information about both the contract and the participant. Then, on demand, the app will perform numerous calculations and return key statistics and meaningful metrics to the user.

The icing-on-the-cake is the numerous reports and charts that PRIMA™ now provides, on demand, that demonstrate, from first principles, how the statistics and metrics were calculated. This provides a high level of confidence in the results for the FA and often reveals new advice opportunities for them.

We believe PRIMA™ will be instrumental in triggering a whole new approach to how VDAs are presented and how existing ones can be monitored and evaluated properly.

## PRIMA™'s IMPORTANT OVERARCHING PRINCIPLE

### *Insurance Company's Point of View*

An Insurance Company is required by law, to set up a liability, called a Reserve, to meet its obligations under each of its Annuity contracts

### *CARVM (Commissioner's Annuity Reserve Valuation Method)*

CARVM is a worst-case Reserving Method. It requires Insurance Companies to evaluate reserves on a policy by policy seriatim basis and to hold a reserve for each contract that covers those actions that a policyholder would take, that would result in the maximum returns for the policyholder.

Many actuaries observed that this was not realistic because it was very unlikely that a policyholder would have enough knowledge to know what their best-case actions would be. In fact, the actual pricing of the product would assume that this was definitely not the case, as bad policyholder decisions were priced into their assumptions.

However, it does present an interesting question. ***Wouldn't the policyholder like to know what actions they could take to maximize their returns?***

More recently, new Reserve requirements called PBR (Principle-Based Reserving), are requiring Insurance Companies to calculate reserves stochastically. This means that they must perform their reserve calculations in thousands of future possible Economic Scenarios. PRIMA™ utilizes the new stochastic approach in its calculations, something that was never available to FA's in the past.

### *What is the Value of a Policy in today's dollars?*

Insurance contracts and the real world are much more complicated than the very simple example described earlier. However, it does highlight PRIMA™'s overarching principle which is stated below:

**IN ANY PROJECTED ECONOMIC SCENARIO, THE VALUE OF A CONTRACT, IN TODAY'S DOLLARS, EQUALS THE PRESENT VALUE OF ALL ITS FUTURE NET CASH FLOWS, DISCOUNTED USING A STREAM OF PROJECTED INFLATION RATES**

### *Is based on the unique policyholder's attributes*

**IN ADDITION, THE VALUE IS GREATLY INFLUENCED BY THE POLICYHOLDER'S RETIREMENT GOALS, TAX BRACKET, TAX QUALIFIED STATUS, ESTIMATED LONGEVITY AND LEGACY PREFERENCES**

### *Important Observation*

This means that, even when investors are the same age and gender, the evaluation and rating of the very same contract may be significantly different for each, due to their unique personal attributes, goals, and personal attributes.

So, how does PRIMA™ calculate a DA's value for each type of participant?

*PRIMA™ establishes ground rules for the DAs.*

### *The Participant*

PRIMA™ asks for their:

1. Retirement Goals
2. Legacy Goals
3. Investment Strategy (e.g., which subaccounts to invest in)
4. Tax brackets
5. Estimated Longevity

*Based on the above PRIMA™ performs the following calculations:*

### *Projects Each DA subaccount*

1. According to its rules and mechanics
2. Stochastically i.e., for up to 1,001 randomly generated, separate and independent economic scenarios

### *Metrics*

1. Generates a calibrated set of 1,001 random Economic Scenarios
2. In each Scenario, records Income paths
3. For each Scenario, calculates the ratio of the Present Value of the DA's future Income streams divided by the Account Value + PV of contributions, then subtract 1.0. Next it multiplies it by 100 to get the percentage.
  - a. This percentage is the 'In-The -Moneyness'" (*ITM*)
  - b. Present Value discounting uses the projected future inflation rates
4. Ranks each of the 1,001 Scenarios by its ITM and AIM and sorts by Rank, from lowest to highest.
  - a. Divides them into 99 Percentile bins (1 thru 99), bins 1 thru 99 have 10 scenarios each

- b. Uses the half-way Economic Scenario (i.e., the median, which is the one ranked 501) at the 50<sup>th</sup> Percentile for PRIMA-™'s standard Metric

### *Important operating principles*

#### Principle 1 – Participant POV

The value of any given contract is not absolute and is a function of what choices the participant makes in the contract, based upon the contract provisions and their personal attributes.

PRIMA™ is therefore, organized around the point-of-view of the participant. In general, the participant knows their current health and financial status, goals, tax bracket, risk-appetite etc. They must use this knowledge in order to take full advantage of the software in determining their optimum strategy.

#### Principle 2 – Cash Only

PRIMA™ is only interested in the net effect on the participant's (future) pocketbook. Therefore, it looks solely at future positive and negative *net cash* events. If it's not a cash event, it's ignored in determining the numerator part of its metrics.

The future cash events PRIMA™ projects, in each scenario, are:

1. Contributions
2. Distributions
3. Retirement age Annuity elections and their Payment streams
4. Retirement age Guaranteed Withdrawal streams
5. Death Benefits
6. Taxes
7. Tax Penalties
8. Tax Rebates

To be sure, there are plenty of other possible events. But they matter *only if* they affect the amount and/or timing of the above cash events.

#### Principle 3 – Discounting

Interest discounts (PVs) are based on inflation.

#### Principle 4 – ITM Formula

In each Scenario, the **ITM** is equal to the PV of all future Net Cash divided by the current Account Value + PV of contributions, minus 1.0. The ITM percentage is equal to this number times 100.

## Principle 5 – AIM Formula

In each Scenario, the **AIM** is equal to the PV of all future Net Cash divided by the PV of future Expenditures, minus 1.0. The AIM percentage is equal to this number times 100.

## Principle 6 – Benefits Exclusions

Allow the participant to exclude certain Benefits they are not interested in. For example, if the participant is only interested in the cash they will receive while they are alive, then they would exclude Death Benefits in the projections.

## Summary

- (1) Great care must be exercised in determining the evaluation of any DA contract both as a stand-alone and when comparing it to other Contracts.
- (2) Many different combinations of strategies are possible, so it's very important to check out as many as you can, to see which one produces the highest rating.
- (3) Look for windfalls that might be in the contract due to errors on the part of the Insurance company. It only takes one outlier in say a singular Joint Payout rate for ages M67/F65 combo to cause the windfall. That's why it's important to run the projections. If it's there, it will stick out from the rest.
- (4) Every contract evaluation is unique, as it's based on the many different attributes of the participant.
- (5) An existing contract must be monitored over time because:
  - a. Economic conditions will change
  - b. Personal attributes will change
  - c. Goals can change
  - d. Risk Appetite can change
  - e. All of these potential changes will affect optimum participant strategies and therefore the evaluation of the DA at every point in the future
  - f. A DA contract is not static. It's a dynamic investment and must be monitored on an on-going basis, a very desirable feature that is support by PRIMA™