

# Goal Coverage in the Retirement Analysis

## Functions Addressed in this Document:

- What is Goal Coverage and how is it calculated for the retirement goal?
- How does NaviPlan<sup>®</sup> indicate that a retirement goal is underfunded or overfunded?
- How does Goal Coverage differ from Cover % of Expenses and % Fixed Needs Covered by Total Resources?
- How can unallocated accounts affect retirement goal coverage?

### What is Goal Coverage and how is it calculated for the retirement goal?

**Goal Coverage** indicates at a high level how successful the strategies included in a scenario are at achieving the retirement goal. **Goal Coverage** is reported for the scenarios on the **Scenarios** page (**Results — Analyze Goals**). In general, **Goal Coverage** is the percentage of all retirement sourced cash outflows that can be covered using all retirement resources. As incomes and expenses typically index each year, all retirement outflows and inflows are discounted back to the first year of retirement so that the higher income and expense amounts in the later years do not outweigh the **Goal Coverage** calculation.

Stated more precisely, **Goal Coverage** is the sum of the present values (PV) of the annual after-tax retirement period incomes, divided by the PV sum of the annual retirement period expenses. In NaviPlan<sup>®</sup>, the formula is expressed as follows:

**Definition:** Goal Coverage is the sum of the present values of the annual after-tax retirement period incomes, divided by the present value (PV) sum of the annual retirement period expenses. In NaviPlan, the formula is expressed as follows:

$$\text{Goal Coverage} = \frac{\sum_{i=0}^{n-1} PV_{\text{incomes}}(i, r)}{\sum_{i=0}^{n-1} PV_{\text{expenses}}(i, r)}$$

$$\text{PV Factor} = (1 + r)^i$$

n = number of years from the first client's retirement year to the last year of the retirement goal, including the last year.

$i$  = year number used in the PV factor for each year of the retirement goal (e.g., if the first client's retirement year is 2015 and 2020 is the year being examined, then  $i=5$  when calculating the value of the retirement abilities and retirement needs for the

$PV_{incomes}$  = the present values of the annual retirement abilities.

$PV_{expenses}$  = the present value sum of the annual retirement period needs.

$r$  = discount rate used in the PV factor (Base Inflation rate found in the **Plan Management** section)

Retirement expenses exclude income taxes and estate taxes, but include all retirement period cash outflows. Property taxes are included if they occur in the retirement period, as well as assumed expenses entered in the plan. This includes expenses listed under **Other Expenses** on the **Cash Flow** page (**Enter Financial Data — Cash Flow**), such as loan payments and insurance premiums.

## How does NaviPlan® indicate that a retirement goal is underfunded or overfunded?

A **Goal Coverage** amount of less than 100% indicates underfunding. Either more resources are required for retirement (i.e., more accounts need to be designated as retirement funding accounts, more retirement savings need to be acquired, or retirement incomes need to be increased) or retirement goals need to be scaled back (i.e., the retirement age needs to be later, or retirement expenses need to be reduced).

Click **What Are My Options?** to display system-generated options that, if selected, will result in 100% **Goal Coverage**.

### What Are My Options?

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The following options will achieve a 100% goal success. Select an option to implement as part of the scenario. Select **Continue Planning...** if you do not want to implement any of the scenarios.

<input type="checkbox"/>	Cover % of Expenses	77%	(\$55,440)
	OR		
<input type="radio"/>	Save Monthly		\$0
	OR		
<input type="radio"/>	Save a Lump Sum		\$0
	OR		
<input type="radio"/>	Retire in	Jul 2019/Jul 2019 (62/53)	
	OR		
<input checked="" type="radio"/>	Continue Planning...		

OK
Cancel

Results — Analyze Goals — Edit <plan> — Retirement

While the **Goal Coverage** amount for overfunded scenarios never exceeds 100%, there are several ways to find out if the retirement goal is overfunded. The **Cover % of Expenses** value under **What Are My Options?** indicates how the retirement goal can be increased while still maintaining 100% Goal Coverage. For example, a **Cover % of Expenses** value of 128% indicates that retirement expenses can be increased by 28%. Note that **Goal Coverage** for overfunded scenarios never exceeds 100%.

Alternatively, the **Attainable Retirement** graph (accessed from the **Quick Actions – Reports – Needs vs. Abilities**) displays surplus funding (goal residuals) represented by the black bar graphs in each year of retirement

In addition to providing the **Goal Coverage** percentage for retirement, the indicators and links on the **Scenarios** page (**Results** section — **Analyze Goals** category) provide a status check on the progress of other goals in the plan. If appropriate, direct funds from an overfunded retirement goal to underfunded education and major purchase goals from **Goal Funding** (**Set Goals** — **Goal Funding** category).

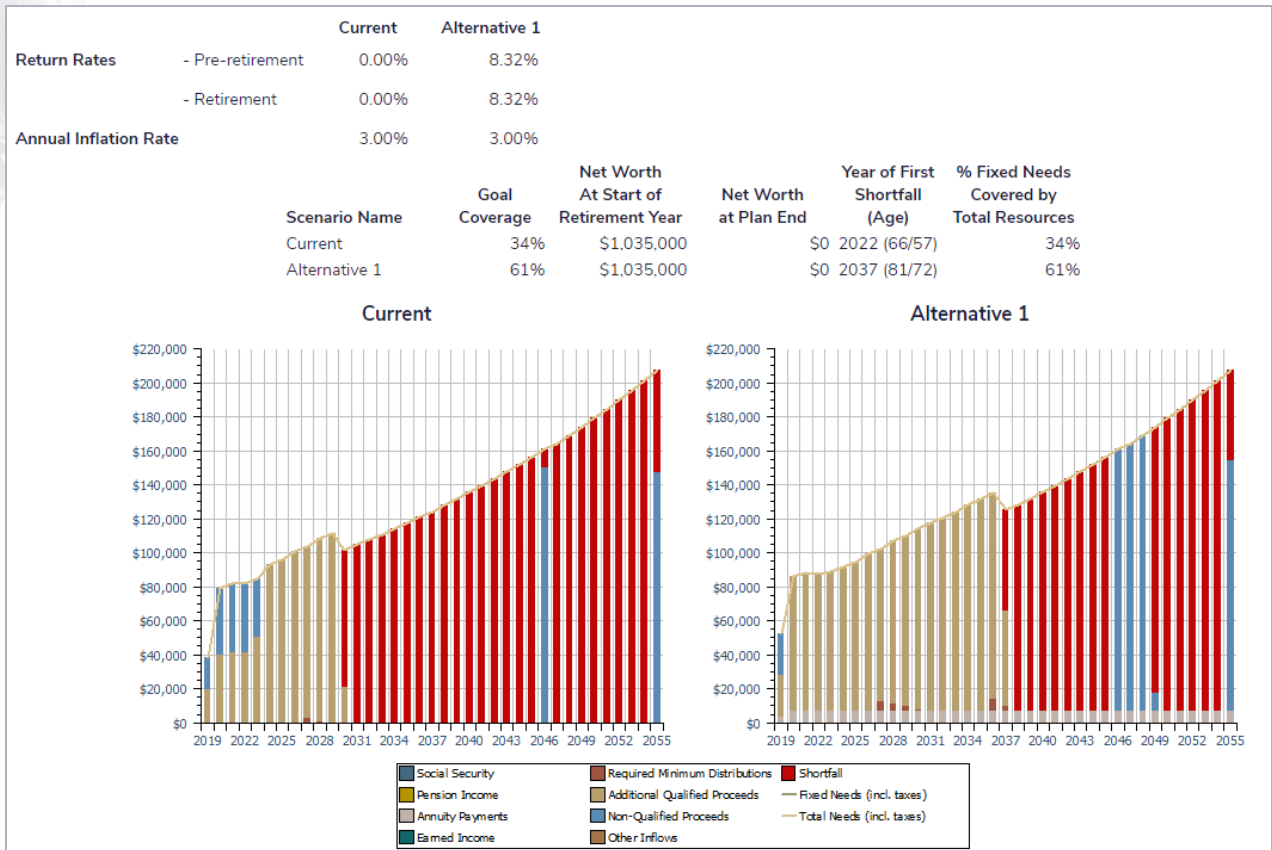
## How does Goal Coverage differ from Cover % of Expenses and % Fixed Needs Covered by Total Resources?

**Goal Coverage**, **Cover % of Expenses**, and **% Fixed Needs Covered by Total Resources** are designed to provide slightly different information and thus each have different uses. The following tables explains their differences:

Percentage	Location	Calculated as...	Used when...
<b>Goal Coverage</b>	<b>Scenario Manager</b>	"Goal Coverage in the Retirement Analysis" on page 1  Illiquid estate deficits in the year of first death are ignored.  It never shows higher than 100%, even when the goal is overfunded.	A quick progress check to gauge the ability of the client(s) to meet the goal as you try entering different strategies and goal changes to scenarios.  Compare the <b>Goal Coverage</b> of the <b>Current Plan</b> scenario to alternative scenarios to evaluate which strategies work best.
<b>Cover % of Expenses</b>	<b>What Are My Options?</b> button	NaviPlan® iteratively projects the analysis, assuming different levels of retirement expenses in each projection. The Cover % of Expenses percentage is the expense level that can be supported expressed as a percentage of the retirement goal.  Applies to fixed and discretionary expenses, but is not intended to apply to education and major purchase goal expenses, liability payments, manually entered saving strategies, life, disability, and long-term care insurance premiums as well as estate planning expenses during the retirement period.  It can show higher than 100% when the goal is overfunded.	Determining by how much your clients need to reduce retirement expenses to meet the retirement goal as stated (or by how much they can increase retirement expenses when the goal is overfunded). You can continue to check this percentage after changing the goal or adding different strategies to see how those changes affect this system-generated recommendation.

Percentage	Location	Calculated as...	Used when...
% Fixed Needs Covered by Total Resources	Compare Scenarios button	<p>The formula is the same as <b>Goal Coverage</b> with a few exceptions: it only considers the fixed needs portion of the retirement goal during the retirement period, illiquid estate deficits in the year of first death are ignored, and the second-to-die estate settlement period is not included.</p> <p>The resulting percentage can be different from <b>Goal Coverage</b>.</p> <p>It never shows higher than 100%, even when the goal is overfunded.</p>	<p><b>Goal Coverage</b> is less than 100%, it can be useful to see if the fixed needs are at least covered. Clients may not be able to achieve full coverage of fixed and discretionary retirement expenses, but may be comforted in knowing that their fixed retirement needs can be met.</p>

In plans where **Goal Coverage** is less than 100% and where some expenses are discretionary, because the **Fixed Exp.** option has been cleared (**Set Goals** section – **Retirement** category – **Retirement** page), it is often helpful to use the **Compare Scenarios** dialog box to determine the percentage of fixed needs that can be covered by total resources.



Results – Analyze Goals – Scenarios – Edit <plan> — Retirement – Scenario

**DID YOU KNOW?** For both **Cover % of Expenses** and **Goal Coverage**, NaviPlan® rounds down the percentage to the nearest whole number except when the percentage is greater than or equal to 99.9%, in which case NaviPlan® rounds the number up to 100%.

## How can unallocated accounts affect retirement goal coverage?

Although NaviPlan® does not use the principal from unallocated accounts to meet retirement needs, the investment income from these accounts can affect goal coverage and **What Are My Options?** calculations. In most cases, this relates to the reinvestment of income and most often occurs in plans where investment income from unallocated accounts makes up a significant portion of income during retirement.

Because investment income (except tax-free returns) earned by non-registered accounts is subject to tax, and in NaviPlan® it is assumed that the tax is paid from those accounts with the estimated net or after-tax amount reinvested, NaviPlan® models the reinvestment of income as follows:

1. Gross amount of the investment income is included as a cash inflow.
2. NaviPlan® estimates the tax due on the investment income by applying the marginal (and, if applicable, state) tax rate to the income.

**Note:** This estimate does not consider tax-related items such as the standard deduction or personal exemptions.

3. NaviPlan® reinvests the estimated net amount into the account (gross amount minus estimated tax) as a cash outflow.

**Example:** David and Susan are retired, and David has a \$2 million non-registered account earning a 5% return rate. The account is unallocated or, more specifically, not being used to fund retirement. David and Susan's marginal tax rate is 25% and they pay no state income tax.

1. The gross amount of David's investment income on the \$2,000,000 comes into cash flow. Based on their 25% marginal tax rate, NaviPlan® estimates the tax to be \$25,000 and reinvests the net amount of \$75,000 into the account as a cash outflow.
2. NaviPlan® calculates the taxes for the plan considering all tax-related information, such as deductions, credits, and personal exemptions. While for reinvestment purposes the estimated taxes based on the 25% marginal tax rate is \$25,000, after considering all tax-related information (such as deductions and credits), taxes are only \$19,868.

Because the taxes calculated for the plan (in this case \$19,868) are lower than the estimated taxes due on the investment income (\$25,000), a surplus of \$5,132 occurs, which NaviPlan® will use to meet retirement income needs.

Explained in more detail, when calculating **Goal Coverage**, NaviPlan® considers the after-tax income or \$80,132 (\$100,000 – \$19,868) as a retirement income and \$75,000 as a retirement need. When NaviPlan® determines the **Cover % of Expenses** value in the **What Are My Options?** calculation, the suggested value would reflect the surplus meeting the established cash flow tolerance.

As a result, investment income from unallocated accounts can affect **Goal Coverage** and **What Are My Options?** calculations. In some plans, as shown in the example, this occurs because NaviPlan<sup>®</sup> includes surplus in the ability to meet retirement needs, when the estimated taxes due on the investment income exceed the income taxes calculated for the plan. This can also occur in plans where investment income is not subject to tax and is simply a cash inflow that offsets cash outflow.