

Goal Coverage in the Education Analysis

Functions Addressed in this Document:

- What is goal coverage and how is it calculated for an education goal?
- How does NaviPlan[®] indicate whether the education goal is underfunded or overfunded?

Education		
College Education	■ 51%	■ <u>83%</u>

Results — Analyze Goals — Scenarios

What is goal coverage and how is it calculated for an education goal?

In general, NaviPlan[®] assesses all needs associated with each education objective entered on the **Set Goals** section – **Education** page and compares the needs of each separate education objective to the education funding accounts allocated to each education objective. This comparison is represented as Goal Coverage and is used as a progress check to monitor how successful the strategies included in scenarios are at achieving education goals.

Goal Coverage is reported for the scenarios on the **Results** section – **Analyze Goals** category – **Scenarios** page. In general, it is the percentage of all annual education costs included in the selected education objective that can be covered using all available education resources allocated to that objective. As education expenses index each year in a typical plan, all annual education costs and education account redemptions are discounted back to the plan year so that the higher amounts in the later years do not overweight the **Goal Coverage** calculation.

$$\text{Goal Coverage} = \frac{\sum_{i=0}^{n-1} \text{PV education account redemption after taxes } (i,r)}{\sum_{i=0}^{n-1} \text{PV annual education fees } (i,r)}$$

PV Factor = $(1+r)^i$

n = number of years between the current plan year and the last year of the education goal, including the first and last year.

i = number of years used in the PV factor for each year of the goal (e.g., if the plan year is 2011 and 2016 is the first year of Marc's educational goal, then i=5 when calculating the present value of the education account redemption after taxes and the annual education fees for 2016).

r = discount rate used in the PV factor (Base Inflation rate found in the **Plan Management - Assumptions - General**)

Education account redemptions for each year of an education objective are:

- Annual redemptions from education goal funding accounts (or portions of accounts). Goal funding accounts may be viewed or edited in a number of places including the **Goal Funding** dialogue box (**Set Goals – Education – Education – Goal Funding**). Redemptions are on January 1 of each year.

Annual education costs for each year of an education objective are:

- Annual Cost entered on the **Set Goals – Education – Education**, indexed by the **Infl +/- Add'l** rate from January 1 of the plan year to December 31 of the year prior to the year the expense occurs. Annual costs are on January 1 of each year.

Example 1: Marc expected to attend college in 2020. It is assumed that both Marc will take four years to earn a degree. Annual costs for both are indexed at 5% (base inflation rate for the plan of 3% + 2% = 5%) each year. Marc's annual education costs entered in today's dollars are \$16,000 per year.

Education Objectives							Add Education Objective
Description *	Member	Start Age/Year	Infl +/- Add'l	Annual Cost	Years	Projected Cost	
College Education	Marc	18 2020	<input checked="" type="checkbox"/> + 2.00%	\$16,000	4	\$72,410	

Set Goals - Education

DID YOU KNOW? There can be one education objective for each family member or one education objective containing the annual costs of one or more family members. The latter can be done if all members' annual education costs are being funded with the same accounts.

Annual projected education costs for Julia and Matthew are listed in the following table. The **Projected Cost** of each education objective (displayed in the previous figure) is the total of all annual projected costs for each child.

Year expense incurred (January 1)	Marc
2020	\$16,800
2021	\$17,640
2022	\$18,522
2023	\$19,448
Total Projected Cost	\$72,410

Continuing with our example, annual education costs and education funding account redemptions are represented in the **Compare Scenarios** report by the **Desired Needs** and **Ability to Cover Needs** graphs respectively.



Results — Analyze Goals — Scenarios — Julia's Education Goal — Scenario Reports

DID YOU KNOW? If the **Monte Carlo Analysis** module is selected, **Compare Scenarios** changes to **Compare Reports**. To compare scenarios, click **Compare Reports**, and then select **Compare Scenarios**.

Marc's annual education redemptions			Marc's annual education costs		
Year	Projected annual redemptions*	PV of projected annual redemptions	Projected annual costs**	PV of projected annual costs	PV formula details
2020	\$16,800	\$16,000	\$16,800	\$16,000	r = 5%, n = 1
2021	\$17,640	\$16,000	\$17,640	\$16,000	r = 5%, n = 2
2022	\$1,931	\$1,668	\$18,522	\$16,000	r = 5%, n = 3
2023	\$0	\$0	\$19,448	\$16,000	r = 5%, n = 4
		\$33,668		\$64,000	

* Refers to the Ability to Cover Needs graph in the **Itemized Cash Flow** report

** Refers to the Desired Needs graph in the **Itemized Cash Flow** Report

Goal Coverage for Marc's education objective = $\$33,668 \div \$64,000 = 51\%$, as reported on the **Results – Analyze Goals – Scenarios**, and on the **Compare Scenarios**.

How does NaviPlan indicate whether the education goal is underfunded or overfunded?

A Goal Coverage amount of less than 100% indicates underfunding. Since Marc's Goal Coverage is 51%, either more resources are required for her education (i.e., more accounts need to be designated as education funding accounts, or more education savings are needed) or her education objective must be scaled back (i.e., the start year must be later, or education expenses must be reduced).

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="radio"/>	Cover % of Expenses	45% (\$7,358)
	OR	
<input type="radio"/>	Save Monthly	\$756
	OR	
<input type="radio"/>	Save a Lump Sum	\$32,330
	OR	
<input checked="" type="radio"/>	Continue Planning...	

OK

Cancel

Clicking **What Are My Options?** displays system-generated options that, if chosen, will result in 100% **Goal Coverage**. See Other sources on this topic at the beginning of this document for a link to more information on the **What Are My Options?** feature.

There are several ways to find out if an education objective is overfunded, including clicking **Compare Scenarios (Results — Analyze Goals — Scenarios — Edit <plan> — Education Goal)**.

The surplus funding (goal residual) is represented by the black bar graph, and the table above the graph indicates the capital remaining at the end of the goal. The **Goal Coverage** amount for overfunded scenarios is capped at 100%.

Results — Analyze Goals — Scenarios — Edit <plan> - Education Goal — What Are My Options?

DID YOU KNOW? Accounts or portions of accounts that are not allocated to any goals flow through to the estate. It is a good idea to consider using unallocated accounts to fund education or other goals before considering other alternatives. You can change goal funding account allocations in a number of locations including the **Set Goals** section – **Goal Funding**.

Another way to determine if the the goal is overfunded is to click **What Are My Options?** (**Results – Analyze Goals – Scenarios – <education goal>**) is another way to determine if the goal is overfunded. **What Are My Options?** communicates how the education goal can be increased while still maintaining 100% **Goal Coverage**. For example, as shown, a **Cover % of Expenses** value of 110% indicates that education expenses can be increased by 10% if all other variables remain the same.

It is a good idea to see if other goals can be met before increasing the education goal. Residual education goal funding in some cases is not used to fund other goals unless the funds are manually allocated to other goals. You may want to manually reallocate excess education goal funding to other goals in the plan that have not yet achieved 100% goal coverage. You can direct funds from the overfunded education goal to underfunded goals, if appropriate, by clicking **Goal Funding** under **Set Goals – Education – Education**. To allocate available account residuals to one or more other goals, you can also enter the keyword balance instead of entering a value.

DID YOU KNOW? When calculating the percentages for **Cover % of Expenses** and **Goal Coverage**, percentages less than 99.9% are rounded down to the nearest whole number, and percentages equal to or greater than 99.9% are reported as 100%.