Connector cheat sheet

What the 9to95 calculator does, what its terms mean, and prompts to paste into your assistant.

What the calculator does

- Checks a scenario for errors and warnings.
- Runs one smooth path to the planning horizon and shows whether the money lasts, and the ending net worth.
- Shows a projection year by year: income, spending, taxes and where each year's withdrawals come from.
- Runs many simulated futures and shows the share in which the money did not run out before the end of each simulated lifetime, with a low case, middle and high case for the ending investment balance.
- Runs the second reading, the share of simulated futures in which the money lasts if both people live to the planning horizon.
- Shows, for each retirement age in a range you set, the share of simulated paths not depleted, and the first age that meets a threshold you type.
- Changes one assumption, such as a retirement age, and shows the simulated result for the changed version.
- Compares two to five plans side by side on one smooth path each.
- Shows how one year's figures were worked out, line by line.
- Explains any term in the results.
- Walks through the settings one at a time with the guided tour.

It does not choose a plan, say when to retire or name what to invest in.

What the terms mean

- **Smooth path.** One path at average returns with both people alive to the planning horizon: whether the accounts run out, and at what age. It leaves out the spread of possible returns and the chance that someone dies earlier.
- **Success probability, many futures.** The share of simulated futures in which the money did not run out before the end of each simulated lifetime; an early death counts as a success. It is not a prediction.
- **Success probability, both live to the horizon.** The share of simulated futures in which the money lasts if both people live to the planning horizon (age 95 unless the scenario sets another). The two readings answer different questions; either can be higher on a given plan.
- **Total and investable net worth.** Total includes home equity and other property, net of loans; investable counts the investment accounts only. They are different measures, so never set one beside the other as if they matched.
- **Low, middle and high case.** The 10th, 50th and 90th percentile of the ending balance across the simulated futures. They describe the spread in the model, not a range the future will stay inside.
- **Today's dollars.** Figures adjusted for price changes to the base year, so a dollar means the same buying power in every year. Nominal dollars are the amounts in the year they occur.
- **Planning horizon.** The last year of the plan. An ending figure belongs to an earlier year when the accounts ran out first.
- **Warnings.** Things in the scenario that are valid but probably not what was meant. They are not results.
- **Trials and seed.** The number of simulated futures and the starting point of the random draws. The same seed and number of trials repeat a result; a different seed moves it a few points.

Starter prompts

Replace every bracket with your own figures. This page gives none and picks none for you; your assistant asks for anything you leave out. Each prompt asks for a comparison or a calculation under your own assumptions.

1. **Two retirement ages.** Compare retiring at [age A] with retiring at [age B] for [each person's current age and state], using [each account's type, balance and stock/bond/cash mix], [annual spending in today's dollars] and [Social Security estimate for each person]. Show the smooth path and the many-futures result for each, side by side.
2. **Two Social Security claiming ages.** Compare claiming Social Security at [age A] with claiming at [age B] for [each person's birth year and estimated benefit], using [each account's type, balance and stock/bond/cash mix], [annual spending in today's dollars], [retirement age] and [state]. Show both results side by side.
3. **Both people live to the horizon.** Calculate the share of simulated futures in which the money lasts if both people live to [planning horizon age], using [each person's current age and state], [each account's type, balance and stock/bond/cash mix], [annual spending in today's dollars] and [retirement age]. Say what that share measures and what it leaves out.
4. **Change one assumption.** Using [my household: ages, state, each account's type, balance and stock/bond/cash mix, annual spending in today's dollars, retirement age], change only [the one assumption] from [current value] to [new value] and show the simulated result for both versions.
5. **Year by year.** For [my household: ages, state, each account's type, balance and stock/bond/cash mix, annual spending in today's dollars] retiring at [retirement age], show year by year the income, spending, taxes and which account each withdrawal comes from, in today's dollars.
6. **Two spending levels.** Compare annual spending of [amount A] with [amount B], in today's dollars, for [each person's current age and state], [each account's type, balance and stock/bond/cash mix] and [retirement age]. Show the smooth path and the many-futures result for each.
7. **Several plans side by side.** Compare [first plan: what differs] with [second plan: what differs], and with [up to three more plans: what differs, if any], on one smooth path each, using [each person's current age and state], [each account's type, balance and stock/bond/cash mix] and [annual spending in today's dollars]. State whether the plans end in the same year.
8. **Ending balance range.** Calculate the low, middle and high case for the ending investment balance for [my household: ages, state, each account's type, balance and stock/bond/cash mix, annual spending in today's dollars, retirement age], and say whether each figure is on the total or the investable basis.