

Retirement Planning with Paper & Pencil

People who have little computer skills often have trouble coming up with a plan that adequately copes with inflation and returns. That was true of my folks who did kitchen-table planning for how much they needed for retirement and how much they could spend once retired. This turned out to be quite painful for them as they downsized their home three times and still needed financial assistance.

The process is a little more difficult with pencil and paper and does not make it as easy to change assumptions to see what would happen in other situations. Still, the paper and pencil method below can be very useful.

You have to start with getting the basic inputs and entering them in the table below:

Example	Your entries	
1,000		Save each month*
50,000		Current retirement savings balance
15		Years till retire
20		Years in retirement

* Inflation-adjusted each year

The rest of the calculations depend on selecting values from Figures 1 and 2 below using the inputs above. These tables are based on the assumption that you can earn 5% above inflation before retiring and 2% after retiring. If the future is like the past, these values would correspond to a pre-retirement portfolio of about 60% stocks and 40% bonds and a post-retirement portfolio of 40% stocks and 60% bonds. You may do better or worse both with your particular selection of investments as well as what happens to the economy and unforeseen events in your personal life.

The final step is to use the values you find in the figures below to complete the calculations for your savings contribution to retirement income. At the end we will add your Social Security and pension to complete your retirement income picture. Figure 1 has the factors necessary to estimate the contributions from new monthly savings for retirement while Figure 2 shows the factors needed to get the contribution from the savings you have already accumulated for retirement. They do not account for emergency funds which should be kept separate from retirement savings.

Fig. 1. Retirement spending after making new savings

Monthly Retirement / NEW Monthly Savings												
Rtmt Years	Number of years till retire											
	4	6	8	10	12	15	20	25	35	30	40	45
5	0.9	1.4	2.0	2.5	3.2	4.2	6.3	8.8	15.6	11.9	20.2	25.7
10	0.5	0.7	1.0	1.3	1.7	2.2	3.3	4.6	8.2	6.2	10.6	13.5
15	0.3	0.5	0.7	0.9	1.2	1.6	2.3	3.2	5.7	4.4	7.4	9.4
20	0.3	0.4	0.6	0.7	0.9	1.2	1.8	2.5	4.5	3.4	5.8	7.4
25	0.2	0.3	0.5	0.6	0.8	1.0	1.5	2.1	3.8	2.9	4.9	6.2
30	0.2	0.3	0.4	0.5	0.7	0.9	1.3	1.9	3.3	2.5	4.2	5.4
35	0.2	0.3	0.4	0.5	0.6	0.8	1.2	1.7	2.9	2.2	3.8	4.8
40	0.2	0.2	0.3	0.4	0.5	0.7	1.1	1.5	2.7	2.1	3.5	4.4

Fig. 2. Retirement spending from current balance of savings

(Monthly Retirement) / (Current Savings Balance / 100)												
Rtmt Years	Number of years till retire											
	4	6	8	10	12	15	20	25	35	30	40	45
5	2.07	2.24	2.42	2.62	2.83	3.18	3.87	4.71	6.98	5.73	8.49	10.33
10	1.09	1.17	1.27	1.37	1.49	1.67	2.03	2.47	3.66	3.01	4.45	5.42
15	0.76	0.82	0.89	0.96	1.04	1.17	1.42	1.73	2.56	2.10	3.11	3.79
20	0.60	0.64	0.70	0.75	0.82	0.92	1.12	1.36	2.01	1.65	2.45	2.98
25	0.50	0.54	0.58	0.63	0.68	0.77	0.94	1.14	1.68	1.38	2.05	2.49
30	0.44	0.47	0.51	0.55	0.60	0.67	0.82	0.99	1.47	1.21	1.79	2.17
35	0.39	0.42	0.46	0.49	0.53	0.60	0.73	0.89	1.32	1.08	1.60	1.95
40	0.36	0.39	0.42	0.45	0.49	0.55	0.67	0.81	1.20	0.99	1.46	1.78

So, using the factors from the figures above, complete the entries in the tables below. These simple steps do the same thing as a computer analysis does in the background.

From new savings:

Save/Month	Fig. 1 Factor
A	B
1,000	1.2

Example
Your entries

You will need some appreciation of whether this contribution from savings to retirement income will be sufficient. The results are all in “today’s” dollars so that you have good perspective of their relative value. Because they are in today’s dollar values, you can compare your future retirement income with your current income for example.

From current balance:

Balance/100	Fig. 2 Factor
C	D
500	0.92

Example
Your entries

These amounts are also pre-tax income. So if you expect lower tax rates in retirement you will have somewhat more to spend, but future tax rates are very speculative and change almost every year one way or another.

Retirement Spending in Today's Dollars

E (A x B)	F (C x D)	Total (E + F)
1,200	460	1,660

Example
Your entries

If your after-tax retirement income looks like it will be insufficient, see if you can’t save some more each month.

To complete your income picture in retirement, add your Social Security and any pension. It’s important to note a few things about these two additional income streams. Delaying the start of Social Security by just one year can increase lifetime benefits by 8% each year, and each of those payments will increase with inflation. With regard to pensions, there is a huge difference between cost-of-living-adjusted (COLA) pensions and fixed pensions that are not adjusted for inflation. If you have a fixed pension, only add the monthly forecast of that pension multiplied by your retirement age over 100, so if you were going to retire at 65 with a \$1,000 monthly fixed pension, only add \$650 to the savings and Social Security Contributions.

Few retirement planning programs account for future large purchases like a new automobile, remodeling, replacing a roof, etc. Paying for such items on credit is very expensive for a retiree, so the simple approach is to subtract the cost of these things from the current retirement savings balance

entry. Then the resulting retirement spending is just for the normal living expenses, and there's still money for the large purchases that will grow to compensate for inflation until the purchase is made.

It's important to do this calculation every year at about the same time. That way you'll be able to adjust your monthly savings to account for whatever the economy or personal financial events may have affected your previous analysis.

If you are within five years of retirement, it's really a good idea to consult a professional for at least one visit. You can find good fee-only planners who will accept fiduciary responsibility (a legal term meaning putting your interest above the planner's) at www.napfa.org and www.fpanet.org.

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