



American
Association of
Individual
Investors



PROFITABLE RETIREMENT PLANNING

THE EASIEST WAY TO LIVE OFF
YOUR PORTFOLIO



PROFITABLE RETIREMENT PLANNING

The *easiest* way to live off your portfolio

Introduction

iii Key Topics Covered Include

CHAPTER 1

How Much of Your Salary Do You Need to Save for Retirement?

- 1 Understanding Time and Money
- 1 Guidelines for the Variables
- 3 The Worksheet: Understanding the Approach
- 8 Investing Fixed Dollar Amounts
- 8 The Salary Savings Table
- 10 Taking Aim

CHAPTER 2

What Will Be the Sources of Your Retirement Income?

- 11 The Basic Sources
- 11 Social Security
- 12 Defined-Contribution Plans
- 13 Pension Plans
- 14 Personal Savings
- 15 Other Sources
- 16 Taking Inventory of the Sources

CHAPTER 3

Investing Your Retirement Assets

- 18 A Diversified Portfolio: Asset Allocation
- 20 Portfolio Combinations
- 22 Retirement vs. Taxable Investments
- 23 Conclusion

CHAPTER 4

Investing in 401(k) Plans

- 25 Tax-Preferred Retirement Savings
- 26 Employer Matches and Other Advantages
- 27 Should You Participate?
- 28 The Bottom-Line Decision
- 29 Conclusion

Introduction

Retirement can be a time of joy, but it can also be a time of challenge. Not only does your lifestyle change, but so does your source of income. The paycheck you received from your job must now be at least partially replaced by your savings, unless you are fortunate enough to be fully covered by a pension. This shift from a salary to savings can seem daunting, but it does not have to be. With careful planning, a commitment to saving and an understanding of your options, you can achieve a financially secure retirement.

Retirees who successfully live off of their savings share a few traits. They started saving early and continuously put money away. They considered their options and developed a plan. They used accounts with tax-advantaged status. Most importantly, they never let the short-term fluctuations of the market deter them. Rather, they determined a sensible portfolio allocation and stuck with it.

You too have the ability to join those who are financially prepared for retirement, and this book can help. On the pages that follow, you will find an overview of many of the primary considerations for retirement planning.

Key Topics Covered Include:

- How much you need to save
- Where your retirement income will come from
- What asset classes you should invest in
- Why you should take advantage of your company's 401(k) or similar type of defined-contribution plan like a 403 (b) (if available)

You can find answers to many of the questions in these chapters.

Remember that you can profitably plan for and enjoy financial success in your retirement. It simply takes a commitment, the willingness to learn and the conviction to stick with a long-term plan. On the following pages, we offer ideas to help you get moving in the right direction.



How Much of Your Salary Do You Need to Save for Retirement?

Two elements are essential to any savings plan: You must know how much you need, and when you will need it.

When saving for specific purchases in the not-too-distant future—a new car or a house—those elements are relatively straightforward. But for retirement planning, those elements are more unknown.

Financial planning worksheets can help individuals with forecasting, but since many are tedious and complicated, few individuals have the desire to work through these forms. The result: Most people throw up their hands and simply ignore the question entirely.

However, there is a simpler approach that you can use to come up with a reasonable retirement savings plan. There are limitations to the approach, and it is important that you understand those limitations and the assumptions used. For that reason, the amount of time it will take you to determine a reasonable savings plan will really be determined by how long it takes you to read and understand this chapter. After that, it will only take you a few minutes to work through the math in the worksheet, or to use the tables at the end of the chapter (for those with no current savings). The approach is designed to help you determine what percentage of your income needs to be set aside each year so that by retirement, you have accumulated enough savings to generate a desired real (inflation-adjusted) level of income during your retirement years.

Understanding Time and Money

There are two important concepts you must understand when dealing with time and money. The first is the power of compounding. When money is invested, it produces earnings that can then be reinvested, so that you receive earnings on your earnings in addition to the earnings on your original investment. This added boost is the power of compounding, and the longer the money is invested, the more powerful its effects are. Over long

periods of time—20, 30 or 40 years—the effects of compounding can be substantial. For instance, if you invested \$10,000 today and it earned 8% annually, you would have \$100,626 at the end of 30 years; if it earned 9% you would have \$132,676 after 30 years. That's a \$32,000 difference with only a 1% difference in annual return.

You can see the advantages of earning higher returns over long time periods. But you must be very careful when creating retirement plans that involve extremely long time periods—small differences in return assumptions can turn into large differences in accumulation. Be conservative in your estimates.

The second important concept concerns the value of a dollar today versus tomorrow. Over time, inflation erodes the worth of money, so that a given amount buys less in the future than it can today. When you are planning for the future, you are examining dollars over numerous time periods. To compare them, they need to be on an equal purchasing-power footing, so they are all in equivalent dollar terms. In the approach used here, the equal footing will be the purchasing power of today's dollars—that is, dollar amounts will always be stated in terms of today's dollar equivalent.

Guidelines for the Variables

These are the variables you will need to determine when filling out the worksheet:

- The number of years you will spend in retirement,
- The number of years until you retire,
- Your total current savings,
- Your desired annual income in retirement and
- The investment returns you expect on your savings.

Some of these are relatively straightforward, while others will require more thought. Here are some guidelines for determining the variables:

NUMBER OF YEARS IN RETIREMENT

How long will you spend in retirement? The approach here assumes you will use up all of your savings in retirement, so the question boils down to how long you expect to live after you retire. The average U.S. retirement age is 61, but the average non-retired American expects to work until age 66, according to Gallup's 2022 Economy and Personal Finance survey. The average life expectancy for someone reaching 65 is about 20 years, according to the Social Security Administration, but one out of every four 65-year-olds will live past age 90 and one out of 10 will live past age 95. If you plan to retire at age 66, assume a retirement period of at least 20 years; longer to be more conservative or if you plan on retiring before age 65.

NUMBER OF YEARS UNTIL RETIREMENT

How many years until you retire? This is pretty straightforward—it is the age at which you want to retire minus your current age.

TOTAL CURRENT SAVINGS

How much have you currently saved? This is also straightforward. It is simply the amount of savings you have accumulated up until now, either in taxable accounts or tax-deferred accounts such as individual retirement accounts or 401(k) plans.

DESIRED ANNUAL INCOME IN RETIREMENT

What should you use as your desired annual income in retirement? While you could try to make an estimate of your needs, an easier method is to base the estimate on a percentage of your current gross, pretax salary (your resulting desired retirement income will also be pretax, and your tax bracket is assumed to be the same both before and after retirement). Many retirement professionals suggest 80% as a benchmark; 100% of your current gross salary is a more conservative estimate. You do not need to adjust your desired income level for inflation; the tables throughout this document will adjust it for you.

What about outside sources of income? At this point, you may want to subtract outside sources of retirement income such as Social Security and any expected pension benefits from defined-benefit plans [contributory plans, such as 401(k)s, should be considered savings]; use the annual benefit stated in today's dollars. Estimates on your earned Social Security benefits can be found on the Social Security Administration's website: www.ssa.gov. (Scroll down to "My Social Security" and log in or create an account to view your current estimated benefits.) If you have any pension benefits, your employer's benefits department should provide you with an estimate. Be aware that Social Security benefits may be altered in the future and if you will not be receiving benefits for many years, you

TABLE 1.1

Long-Term Return Estimates

	Annual Return	Aftertax Return at 22% Tax	Aftertax Return at 12% Tax	Aftertax Return at 10% Tax
Small-Cap Stocks	11.8%	9.2%	10.4%	10.6%
Large-Cap Stocks	10.1%	7.9%	8.9%	9.1%
Long-Term Corp Bonds	5.7%	4.4%	5.0%	5.1%
Long-Term Gov't Bonds	5.2%	4.1%	4.6%	4.7%
Cash*	3.2%	2.5%	2.8%	2.9%

*U.S. Treasury bills.

Source: Ibbotson SBBi 2023 Classic Yearbook, data from 1926–2022.

may want to exclude them from your forecast retirement income.

EXPECTED RETURN ON SAVINGS

What rate of return should be used for savings, both before and after retirement? Your return will be a function of the mix of investments in your savings portfolio. For instance, if your savings are roughly divided evenly between stocks and bonds, your return would be 50% of the return from stocks plus 50% of the return from bonds.

Rates of return should be conservative and reasonable, preferably based on long-term historical averages. Table 1.1 presents estimates of returns for several major investment categories, based on almost 100 years of historical return data.

What about taxes? If most of your savings are in tax-deferred accounts, such as an individual retirement account or 401(k) plan, your return will be unaffected by taxes. However, if your savings are in taxable accounts, you should reduce your expected return to account for taxes. Taxes will have less of an impact on certain investments, such as stocks and low turnover stock mutual funds, since most of their return is due to long-term capital gains; taxes on these gains can be deferred until the asset is sold. Bonds and Treasury bills, however, are more affected by taxes, since most of their return is from income that is taxed annually. Table 1.1 provides rough guidelines for aftertax rates of returns for individuals in the 10%, 12% and 22% tax brackets, assuming all returns for all categories are taxed annually, a very conservative assumption.

What if your savings are in both tax-deferred and taxable accounts? Do separate calculations for your taxable and tax-deferred savings, multiplying them by different savings growth factors based on the different return assumptions. Then add them together.

Will your returns be similar before and after retirement? Some individuals invest more conservatively after retirement, particularly as assets are drawn down and income and liquidity become more of a concern. On the other hand, it is important to keep

some exposure to higher-return equities. You will have to decide what mix of investments is appropriate for your risk tolerance at that stage.

Should you reduce your return expectations to take inflation into account? No. Though inflation reduces your ability to buy future goods and services, a diversified portfolio should provide enough growth to overcome the adverse impact of inflation.

The Worksheet: Understanding the Approach

The approach used in the worksheet is straightforward, but it makes several assumptions. First, it assumes a 4% rate of inflation. It also assumes that all of your savings will be used up by the end of your retirement period. In the last step, it assumes that your annual salary will grow at the rate of inflation. These are the basic steps in the approach:

- First, your desired annual income level in retirement is multiplied by an annuity factor (Table 1.2), based on your number of years in retirement and the expected return on your savings in retirement. The resulting figure is today's dollar equivalent of the amount of savings you will need to accumulate by the time you retire to support your desired annual income level in real terms—in other words, your desired income level will grow with inflation to maintain its real value.
- Next, any current savings you may have is multiplied by the savings growth factor (Table 1.3), based on the number of years until retirement and the return you expect to earn on these savings. The resulting figure is today's dollar equivalent of the amount your current savings will grow to by the time you retire.
- Subtracting the amount you will have from the amount you will need indicates your shortfall—today's dollar equivalent of the amount you will need to save by the time you retire to support your desired annual income level.
- Next, the shortfall is multiplied by the annual

(continued on page 6)

Retirement Savings Worksheet

Use this worksheet, along with Tables 1.2–1.5, to help determine how much you need to save for retirement. The guidelines in the text can help you determine the appropriate variables in the worksheet and tables.

Retirement Savings Needed:

Multiply your desired annual income in retirement by the Annuity Factor.

- Determine your desired annual income in retirement; if you want to take into consideration outside sources of retirement income (e.g., Social Security), subtract your expected annual benefits in today's dollars from your desired annual income.

(desired annual income)

- To find your Annuity Factor, look at the first column in Table 1.2 and find the number of years you expect to be in retirement; then go across until you find the rate of return you expect on your savings during retirement. The corresponding figure is your Annuity Factor.

× _____

(annuity factor
from Table 1)

- Line 1 tells you the value in today's dollars of the amount you will need to save by retirement in order to have the desired annual income in real terms for the number of years you are expected to be in retirement.

= _____

(line 1)

Current Savings:

Multiply your current savings by the Savings Growth Factor.

- To find your Savings Growth Factor, look at the first column in Table 1.3 and find the number of years until you will retire; then go across until you find the rate of return you expect on your savings during this period. The corresponding figure is your Savings Growth Factor.

(current savings)

- If you have both taxable and tax-deferred savings, do separate calculations for each (multiply each one by the relevant savings growth factor) and then add them together.

× _____

(savings growth factor
from Table 2)

- Line 2 tells you the value in today's dollars of the amount your current savings will grow to by the time you retire.

= _____

(line 2)

(worksheet continues on next page)

Retirement Savings Worksheet (continued)

Savings Shortfall:

Subtract Line 2 from Line 1.

- Line 3 tells you the value in today's dollars of the amount of your shortfall.

$$\begin{array}{r} \text{_____} \\ \text{(line 1)} \\ - \text{_____} \\ \text{(line 2)} \\ = \text{_____} \\ \text{(line 3)} \end{array}$$

Annual Savings:

Multiply Line 3 by the Annual Payment Factor.

- To find your Annual Payment Factor, look at the first column in Table 1.4 and find the number of years until you retire; then go across until you find the rate of return you expect on your savings during this period. The corresponding figure is your Annual Payment Factor.
- Line 4 is the value in today's dollars of the amount you need to save annually to make up the shortfall.

$$\begin{array}{r} \times \text{_____} \\ \text{(annual payment factor} \\ \text{from Table 3)} \\ = \text{_____} \\ \text{(line 4)} \end{array}$$

Percentage of Salary You Need to Save Annually:

Divide Line 4 by your current salary

- The resulting figure is the percentage of your salary you need to save each year to make up the shortfall, assuming your salary keeps pace with inflation.

$$\begin{array}{r} \div \text{_____} \\ \text{(current salary)} \\ = \text{_____} \\ \text{(percentage of sale)} \end{array}$$

Fixed Annual Savings

To convert savings into a fixed dollar amount:

Multiply Line 3 by the Fixed Dollar Payment Factor.

- To find your Fixed Dollar Payment Factor, look at the first column in Table 1.5 and find the number of years until you retire; then go across until you find the rate of return you expect to earn on your savings during this period. The corresponding figure is your Fixed Dollar Payment Factor.
- The resulting figure is the fixed dollar amount you need to save each year.

$$\begin{array}{r} \text{_____} \\ \text{(line 3)} \\ \times \text{_____} \\ \text{(fixed dollar payment factor} \\ \text{from Table 4)} \\ = \$ \text{_____} \\ \text{(fixed dollar amount)} \end{array}$$

TABLE 1.2

Annuity Factor

Number of Years in Retirement	Expected Return on Savings				
	4%	6%	8%	10%	12%
20	20.00	16.79	14.31	12.36	10.82
25	25.00	20.08	16.49	13.82	11.80
30	30.00	23.07	18.30	14.93	12.48
35	35.00	25.79	19.79	15.76	12.95
40	40.00	28.26	21.03	16.39	13.28

TABLE 1.3

Savings Growth Factor

Number of Years to Retire	Expected Return on Savings				
	4%	6%	8%	10%	12%
5	1.00	1.10	1.21	1.32	1.45
10	1.00	1.21	1.46	1.75	2.10
15	1.00	1.33	1.76	2.32	3.04
20	1.00	1.46	2.13	3.07	4.40
25	1.00	1.61	2.57	4.06	6.38
30	1.00	1.77	3.10	5.38	9.24
35	1.00	1.95	3.75	7.12	13.38
40	1.00	2.14	4.52	9.43	19.38

If you have no current savings, Table 1.6 provides the bottom line answer regarding the percentage of your current salary that needs to be saved annually to reach certain retirement goals.

payment factor (Table 1.4), based on the number of years until retirement and the return you expect to earn on your savings. The resulting figure indicates today's dollar equivalent of the amount you need to save annually to make up the shortfall by the time you retire.

- Lastly, dividing the annual savings amount by your current gross salary (before taxes and

benefits are deducted) indicates the percentage of your salary that you need to save annually to make up for the shortfall by retirement to reach your retirement goal, assuming your salary increases with inflation.

As an example, let's assume that your current income is \$75,000, your savings consist of \$25,000 in a 401(k) plan, you are planning to retire in 25 years and you expect to earn 8% on your savings both

TABLE 1.4

Annual Payment Factor

Number of Years to Retire	Expected Return on Savings				
	4%	6%	8%	10%	12%
5	0.200	0.189	0.178	0.168	0.159
10	0.100	0.090	0.081	0.073	0.065
15	0.067	0.057	0.049	0.041	0.035
20	0.050	0.041	0.033	0.026	0.021
25	0.040	0.031	0.024	0.018	0.013
30	0.033	0.024	0.018	0.012	0.009
35	0.029	0.020	0.013	0.009	0.006
40	0.025	0.017	0.011	0.006	0.004

TABLE 1.5

Fixed Dollar Annual Payment Factor

Number of Years to Retire	Expected Return on Savings				
	4%	6%	8%	10%	12%
5	0.225	0.216	0.207	0.199	0.192
10	0.123	0.112	0.102	0.093	0.084
15	0.090	0.077	0.066	0.057	0.048
20	0.074	0.060	0.048	0.038	0.030
25	0.064	0.049	0.036	0.027	0.020
30	0.058	0.041	0.029	0.020	0.013
35	0.054	0.035	0.023	0.015	0.009
40	0.051	0.031	0.019	0.011	0.006

If you have no current savings, Table 1.6 provides the bottom line answer regarding the percentage of your current salary that needs to be saved annually to reach certain retirement goals.

before and after retirement. You want to retire with an income level that will be equivalent to 80% of your current salary (\$60,000) over your retirement period, which you expect to last 25 years:

- Your \$60,000 desired income level multiplied by the Table 1.2 Annuity Factor of 16.49 equals \$989,400.
- Your \$25,000 current savings multiplied by

the Table 1.3 Savings Growth Factor of 2.57 is \$64,250.

- \$989,400 minus \$64,250 is \$925,150, which is today's dollar equivalent of your shortfall, and the amount you still need to save.
- Your \$925,150 shortfall multiplied by the Table 1.4 Annual Payment Factor of 0.024 is \$22,204, today's dollar equivalent of the

amount you need to save annually.

- \$22,204 divided by your current salary of \$75,000 is 29.6%—the percentage of your salary (including any contribution matches from your employer) you need to save each year.

You may want to go through the worksheet several times using different variables—for instance, assuming different rates of return in your projections. This will illustrate the impact of these variables on your plans, and may prompt you to rethink some of your assumptions and perhaps even your plans. For instance, it will become clear that the earlier you start saving, the less you need to put aside each year; similarly, the more aggressively you invest for higher returns (within reason), the less you need to put aside annually.

Investing Fixed Dollar Amounts

The approach in the worksheet provides you with an indication of the percentage of your salary that you need to save each year, the most commonly recommended way to save and the method used by many retirement plans, which are usually based on a percentage of one's salary.

However, some individuals may prefer to invest a fixed dollar amount each year, an amount that remains constant—for instance, \$10,000 each year, unadjusted for inflation. While the worksheet produces an annual savings amount, this is in today's dollars, an inflation-adjusted amount that maintains today's purchasing power; however, in future dollar terms, it increases each year by the inflation rate.

If you want to save a fixed dollar amount and still meet your stated retirement goal, the savings shortfall in the worksheet can be multiplied by a fixed dollar payment factor (Table 1.5), based on the number of years until retirement and the return you expect on your savings. The resulting figure is the fixed dollar amount you would need to save each year.

As an example, the savings shortfall in our example was \$925,150; multiplying this by the Table 1.5 fixed dollar annual payment factor of 0.036 produces \$33,305, which is the amount that must

be saved annually to reach the example's retirement goal.

The Salary Savings Table

If you have no current savings, Table 1.6 provides the bottom-line answer regarding the percentage of your current salary that needs to be saved annually to reach certain retirement goals. It includes:

- Percentages based on three different retirement scenarios: a retirement period lasting 20 years, one lasting 25 years and one lasting 30 years.
- Percentages based on two different retirement income scenarios: one that is 100% of your current salary and one that is 80% of your current salary.

For these scenarios, the tables indicate the percentage of your current salary that needs to be saved annually based on various assumed rates of return and the number of years until retirement. Use the guidelines presented above to determine which of these best fits your situation.

The assumptions underlying the tables are: a 4% average rate of inflation; salary and annual retirement income is pretax and both grow annually at the rate of inflation; the rate of return on savings is the same both before and after retirement; all savings are used up at the end of the retirement period.

As an example, let's assume an individual wants to retire on 100% of his current salary, expects to be retired for 25 years, has 30 years until retirement and expects a return of 8% on his savings both during and after retirement. He would have to save 29% of his salary each year to generate an income level equal to 100% of his current salary for a 25-year retirement period.

In contrast, an individual with the same assumptions except that he expects annual returns of 10% would only have to save 17% of his salary each year. Even luckier is the individual who expects 10% returns but has 40 years until retirement—he would only have to save 9% of his salary each year.

TABLE 1.6

What Percentage of Your Salary Must You Save Annually?

Assumptions:

- 4% inflation
- Salary and retirement income is pretax
- Salary and annual retirement income grow with inflation
- All savings are used up
- Current savings are \$0

Retirement Period: 20 years

If you want to retire at 100% of salary:

Years to Retire	Expected Return on Savings				
	4%	6%	8%	10%	12%
5	400%	317%	255%	208%	172%
10	200	151	116	90	70
15	133	96	70	51	38
20	100	68	47	33	23
25	80	52	34	22	14
30	67	41	25	15	9
35	57	33	19	11	6
40	50	28	15	8	4

If you want to retire at 80% of salary:

Years to Retire	Expected Return on Savings				
	4%	6%	8%	10%	12%
5	320%	254%	204%	167%	138%
10	160	121	92	72	56
15	107	77	56	41	30
20	80	55	38	26	18
25	64	42	27	18	11
30	53	33	20	12	8
35	46	27	15	9	5
40	40	22	12	6	3

Retirement Period: 25 years

If you want to retire at 100% of salary:

Years to Retire	Expected Return on Savings				
	4%	6%	8%	10%	12%
5	500%	379%	294%	233%	188%
10	250	181	133	100	77
15	167	115	80	57	41
20	125	82	54	36	25
25	100	62	39	25	16
30	83	49	29	17	10
35	71	40	22	12	7
40	63	33	17	9	5

If you want to retire at 80% of salary:

Years to Retire	Expected Return on Savings				
	4%	6%	8%	10%	12%
5	400%	303%	235%	186%	150%
10	200	144	107	80	61
15	133	92	64	46	33
20	100	65	43	29	20
25	80	50	31	20	13
30	67	39	23	14	8
35	57	32	18	10	5
40	50	27	14	7	4

(tables continue on next page)

TABLE 1.6 CONTINUED

What Percentage of Your Salary Must You Save Annually?

Assumptions:

- 4% inflation
- Salary and retirement income is pretax
- Salary and annual retirement income grow with inflation
- All savings are used up
- Current savings are \$0

Retirement Period: 30 years

If you want to retire at 100% of salary:

Years to Retire	Expected Return on Savings				
	4%	6%	8%	10%	12%
5	600%	436%	326%	251%	199%
10	300	207	148	108	81
15	200	132	89	62	44
20	150	94	60	39	26
25	120	71	43	27	17
30	100	56	32	19	11
35	86	46	25	13	7
40	75	38	19	10	5

If you want to retire at 80% of salary:

Years to Retire	Expected Return on Savings				
	4%	6%	8%	10%	12%
5	480%	348%	261%	201%	159%
10	240	166	118	87	65
15	160	105	71	49	35
20	120	75	48	31	21
25	96	57	35	21	13
30	80	45	26	15	9
35	69	37	20	11	6
40	60	30	15	8	4

The table illustrates a key point in retirement planning: It is much easier to achieve a desired retirement objective by starting early, and also investing aggressively. If you start late, meeting a particular retirement objective can consume an unrealistically large part of your annual income.

Taking Aim

Time plays a major factor in retirement estimates. The effects of compounding over a very long time period can mean big swings in results with only a small difference in assumptions.

Make sure you use conservative assumptions, but also understand that this planning device only

provides a rough guide. It is impossible to predict with much accuracy how much you will need in retirement many years down the road, since all of the assumptions can change dramatically, including your own desires. Instead, aim for a general savings target, and every few years review your assumptions and see if you can bring your target into closer focus.

Remember, when you do retire, you will have to adjust your lifestyle to your savings, rather than the other way around.

What Will Be the Sources of Your Retirement Income?

Almost all investors would agree that providing for a comfortable retirement is a paramount financial objective. To plan properly, an investor needs to know:

- How much will be needed for retirement?
- What will be the sources for meeting that need?

Estimating your retirement needs, of course, is not an easy task. Chapter 1 provided a simplified approach to tackling this aspect. Equally difficult is the other half of the equation—sorting out where your retirement dollars will come from. Many investors have misperceptions of the various sources of their retirement income and the role each source will play at and during retirement. This is particularly true today because most non-governmental employees lack access to a pension and possible changes could be made to Social Security. These misperceptions can cause investors to establish the wrong strategy for amassing sufficient funds for their later years.

This chapter will explore the varied sources of an investor's retirement savings, what form it will come in (whether a monthly payment or lump sum) and how you can determine what to expect from each.

The Basic Sources

For most individuals, the basic retirement income sources are: Social Security, defined-contribution plans [e.g., 401(k) plans], employer-sponsored defined-benefit plans (pensions) and personal savings.

How much you are likely to receive from each of these sources will vary greatly with personal circumstances, of course. In general, the percentage from each will depend on your age group—for instance, some workers above the age of 60 may retire with pensions. Many employees rely heavily on 401(k) plans and individual retirement

accounts (IRAs). Social Security will play a varying role: Those earning less during their careers and lacking a defined-benefit or defined-contribution plan will depend on it more as the primary source of their retirement income.

Let's look at the sources and what you can expect from each.

Social Security

The first retirement income source for most working individuals (and their spouses) is Social Security, which began during the late 1930s as a supplement to one's savings. It has since grown to represent, for many people, a sizeable part of retirement income.

What can one expect to receive from Social Security at retirement? Benefits come in the form of monthly payments, based on your final years' salary and number of working years. You can get an estimate of your earned Social Security benefits by visiting the Social Security Administration's website at www.ssa.gov and scrolling down to "My Social Security." After you log in or create an account, the website lists your earnings for each year and provides an estimate of benefits, assuming retirement at age 62, your full retirement age and age 70. To calculate the estimate, Social Security must make a number of assumptions concerning future earnings; thus, the closer you are to retirement, the more realistic the estimate.

As a very rough idea, assume that a person is currently 45 years old and earns the maximum annual earnings subject to Social Security tax each year. At age 67 (the earliest age at which the person can retire and collect full monthly benefits) the retiree would receive \$3,047 monthly (in today's dollars). If retirement is delayed until age 70, the monthly benefit increases to a maximum of \$3,992. (Regardless of retirement age, the monthly benefit will be eligible for annual cost of living increases under current rules.) Benefits are also payable to

dependents, which means a family could receive additional benefits. For those who have maximum taxable earnings, Social Security is designed to replace roughly 40% of total working income; individuals who have earnings that are less than the maximum subject to Social Security taxes receive a somewhat higher percentage in the form of benefits.

There is considerable debate over the long-term financial viability of Social Security, and we will not go into the arguments here. However, younger individuals would be well-advised to de-emphasize Social Security for a number of reasons, all of which have the potential to reduce expected benefits.

First, there is the possibility of raising the age at which a person may begin to receive full monthly benefits. This has happened in the past: Currently, those born in 1960 or later will find that they must wait until age 67 to collect their full monthly benefits.

The thresholds for determining how much of benefits are taxed could be adjusted. As of 2023, up to 85% of benefits are taxable for married couples filing joint returns with incomes above \$44,000. These levels could be adjusted.

The formula used to calculate the cost of living adjustments to benefits may be altered. For example, if a “chained” inflation measure is used, future benefit increases would be smaller than they would otherwise be using the current inflation calculation. Such a change would reduce the amount of real (inflation-adjusted) monthly income retirees would receive.

It is for these reasons those younger than age 60 should prepare for the possibility of Social Security playing a smaller role in retirement planning. On the other hand, a person retiring in the next few years may avoid some, but potentially not all, of the negative effects of proposed changes in Social Security.

Defined-Contribution Plans

The common employer-sponsored retirement plan

is the defined-contribution plan. Better known by their tax code designations, such as 401(k) and 403(b), these plans specify an amount the employer will contribute to employee savings. Under these plans, employees invest pretax money in various investment alternatives chosen by the employer. Employers are not required to match an employee’s contribution, although many do match part or all of what an employee puts into the plan.

Retirement benefits from a defined-contribution plan come in the form of a lump-sum dollar amount upon retirement. The size of this amount will depend on the investment choices you make over the years, the amount contributed each year and the number of years you participate. Many plan sponsors offer online tools to help determine whether you are on track to achieve your savings goals and how much savings you may have at retirement. As shown in Chapter 1, you can also make a very rough calculation of your final amount by making an estimate of your annual contributions, the number of years to retirement and the approximate return you expect on your investments (based on your investment mix), and using an annuity table (the future value of a periodic investment).

Clearly, the size of your benefits depends on decisions you make within the limits of the choices offered. This has advantages as well as disadvantages. There is the potential in some employers’ plans to make above-average long-term investment returns because of good investment options. On the other hand, poor investment returns will produce fewer dollars at retirement. In addition, the ultimate assets at retirement may not be big enough for a comfortable lifestyle if the employee did not start early enough and contribute as much as possible. And, of course, some plans may not offer a broad array of investment options, may include underperforming funds, or may have above-average expenses.

If you are a participant in a 401(k)-type plan, you should make sure you understand the investment choices available, and you should carefully plan an investment strategy making best use of the options. You should also become familiar with the

administrative rules governing the plan. While an employee has a vested right to the current value of the money he contributed, he may not have an immediate right to any contribution made by the employer. Often a plan states that the employer's contribution vests to the employee after a period of time—say, two years. Employees leaving one company for another should know exactly what they are entitled to from their plan. In addition, they should be aware of the tax rules regarding distributions and rollovers.

If you leave a company and have participated in a defined-contribution plan, you may be allowed to keep your dollars in the plan. This can be beneficial if the plan has excellent investment options. Some plans, however, do not allow this. In either case, you have the option of rolling over these dollars into an IRA. In this case, you will generally have greater control over the money.

If you do leave a company and keep your assets in the plan, you should stay in contact with the human resources office to monitor changes in the plan and inform the company of any personal changes.

Pension Plans

Employer-sponsored defined-benefit retirement plans—commonly called “pension” plans—are offered by a relatively small percentage of private industry employers now, but are still a key source of retirement income for many people.

Benefits received under these plans are in the form of monthly payments, based on the employee's years of service and final years' salary. Monthly retirement benefits from defined-benefit plans may be paid either directly by the company, or from annuities purchased by the company.

Employees start accruing benefits (known as “vesting”) after a certain number of years with a firm. Benefits under these plans are usually based on your years of service and either your average salary for the last five years or the last full year of employment; most plans then multiply the salary figure and the years of service by a percentage to calculate the actual amount at retirement. Pension

plans are designed to replace only a portion of your salary upon retirement.

If your company sponsors a defined-benefit plan, you should check the rules regarding when you vest in the plan, the formula used to determine your monthly benefit (especially important for those who expect to retire soon), whether the plan has a cost-of-living adjustment for retirees (a few do) and the portability of your benefits. The latter offers employees considerable flexibility: Some defined-benefit plans have been modified recently to allow you to take the present value of some of your accrued benefits with you when you leave the company (a so-called cash balance plan). You then have the option of rolling this over into an IRA. You may even be able to grow these dollars to a higher level than would have accrued under the plan. Make sure you understand the tax rules regarding distributions and rollovers, however.

Some employers will give current employees an annual estimate of what they can expect to receive at retirement. The caveat is that the estimate makes certain assumptions: you will work at the same company until retirement and your salary increases by a certain fixed percentage (often only 3% or 4%).

If you leave a company before retirement and are vested in the firm's defined-benefit plan, you should request a calculation of the monthly benefits that could be expected at the normal retirement age. You should also make sure that you know who to contact in the human resources area at that company, and stay in touch with them every few years to understand any changes in the plan and to inform them of any personal changes, such as a new address or marital status. This will keep your records up-to-date, and it will make it easier to file for benefits when first eligible. A company is not legally obligated to keep in contact with a former employee who has a vested benefit and who leaves before retirement. It is thus your responsibility to actively keep in contact. It is beneficial to keep in touch, even for former employees who did not amass a potentially large dollar amount.

While the idea of a steady stream of income is appealing, there are a number of less-than-obvious reasons why these plans may not deliver the benefits expected:

- Many workers fail to accrue meaningful benefits because they do not stay with one employer for long time periods. [While you may be “vested” in a plan (entitled to accrue and receive benefits), the level of benefits promised are based on the number of years employed by the firm and your final salary.]
- Most plans lack cost-of-living adjustments, which means inflation may erode the real value of the promised monthly payments.
- Companies may go out of business or have put aside insufficient assets to fund the plan. Participants in defined-benefit plans are offered some protection from this by the Employee Retirement Income Security Act (ERISA), passed in 1974, which set minimum funding standards and established the Pension Benefit Guarantee Corp. (PBGC). All companies with defined-benefit plans must pay a per-employee premium to the PBGC, which assumes responsibility for pension plans when a company can no longer do so. However, benefits may be reduced somewhat under PBGC administration.
- The company may terminate its plan. When a plan is terminated, an employer will generally “annuitize” the vested benefits, purchasing annuities from an insurance company for those employees who are vested. The amount of the annuity is based upon the employee’s current salary and service and does not take into account his future years of service and salary increases. This will result in the employee receiving less money at retirement than he would have received had the plan not terminated. Some employers do not purchase annuities, but instead distribute the present value of the benefits accrued by vested employees, again based on the employee’s current salary and service. The employee then has the option of rolling the money over into an IRA. Again, make

sure you understand the tax implications of rollovers and distributions.

While many state and local governments still offer pensions, most private industry employers offer contributory plans, such as 401(k) plans, instead.

Personal Savings

Individual retirement accounts (IRAs) provide more flexibility on how savings are invested. These accounts allow a person to invest without incurring capital gains and dividend taxes, as long as the tax rules are not violated. A traditional IRA is funded with pretax dollars and withdrawals are taxed at ordinary income rates. A Roth IRA is funded with aftertax dollars but withdrawals are not taxed.

For 2023, contributions to traditional IRAs are fully tax-deductible up to \$6,500 (76,500 for those ages 50 or older) if neither spouse is an active participant in an employer or self-employed retirement plan. If only one spouse participates in an employer or self-employed plan, the other can make a tax-deductible contribution up to certain income limits. Starting in the year a person turns 73, withdrawals must be made in accordance with the required minimum distribution (RMD) rules.

Other deductible IRAs, such as SEP IRAs, also are subject to the RMD rules.

Roth IRA contributions can be made as long as modified adjusted gross income does not exceed certain thresholds. For 2023, the threshold for married couples filing jointly is \$228,000. Check with the IRS for changes to the income limit. RMDs are not required to be taken from Roth IRAs.

The need to fund other financial objectives before retirement often means that the amount put aside periodically for retirement is minimal; income taxes on taxable investments are also powerful obstacles to personal savings. In addition, reliance on personal savings could be for naught if an emergency or catastrophe causes the depletion of one’s savings before retirement.

Yet for most people, the other sources of retirement income will not be enough on their own

TABLE 2.1

Sources of Periodic Income

	Tax Characteristics as Retirement	Cost-of-Living Adjustments	Long-Term Visibility
Social Security	Part of benefit may be taxable	Annual; index for calculating increases could be changed	Chance of revisions being made
Defined-Benefit Plan	Taxable as income when received	Depends on plan	Many plans have been frozen or terminated
Individual Annuity	Part of distribution is taxable	Depends on contract	Returns may not be high enough to keep up with inflation; pay attention to costs and withdrawal restrictions
Tax-Deductible Retirement Accounts	Withdrawals are taxed as income; penalties for not taking RMD or withdrawing before age 59½	Depends on investor's strategy	A good source for long-term savings; build up if possible
Roth Retirement Accounts	Withdrawals are tax-free if taken at least five years after first contributions; penalties for withdrawing before age 59½	Depends on investor's strategy	A good source for long-term savings; can reduce future taxes and Medicare premiums; build up if possible

to meet retirement needs; they will have to be supplemented by personal savings. For the most part, your personal savings will consist of a lump-sum amount upon retirement, based on how much you have saved and where you have invested it. If you have purchased annuities, however, you will receive a monthly fixed payment.

Other Sources

There are two other often overlooked sources of

retirement savings, although they should be used with caution. One is your home. If you do not intend to stay in your home after retirement and intend to live in less expensive quarters, you could sell your house and use the difference between the sales proceeds and the cost of your new home; up to \$250,000 of the gain, or \$500,000 of the gain for married couples filing joint returns, can be excluded from taxes. This exclusion is available to all taxpayers who have owned and lived in their

TABLE 2.2

Sources of Lump-Sum Assets

	Tax Characteristics as Retirement	When to Use to Supplement Retirement Income
Taxable Savings	Realized gains and income are taxed each year	Use first, especially if your marginal tax rate is higher than long-term capital gains or dividend tax rate
Tax-Deductible Retirement Accounts	Payouts are taxed as income, but tax is deferred until withdrawals are made	Defer as long as possible to take advantage of tax-deferred status; withdrawals must start by age 73
Lump-Sum Retirement Distributions	Can be rolled into an IRA without penalty within 60 days	Defer as long as possible to take advantage of tax-deferred status; withdrawals must start by age 73
Sale of House	Exclusion of up to \$250,000, \$500,000 for married couples filing jointly	Use in place of other non-taxable sources if needed
Sale (Surrender) of Life Insurance Policy	Taxable as income if cash received exceeds dividends	Use in place of other non-taxable sources if needed; make sure you do not need the insurance for estate planning purposes
Roth IRA	No taxes on withdrawals	Defer as long as possible to take advantage of tax-free status; good for growth assets

home for two of the five years before the sale.

Another possibility is a reverse mortgage, which will give you periodic income from the house. Be sure that you fully understand the implications of either selling your house or taking a reverse mortgage before you proceed with the transaction.

The cash value of a life insurance policy could be another possible source, since your need for life insurance is usually small upon retirement. However, if you are using life insurance as an estate planning device, you should make sure that any contemplated surrender does not negate the

work you have done to avoid or reduce inheritance taxes.

Taking Inventory of the Sources

If you are attempting to build a retirement plan, you must take financial inventory of your retirement income sources. This means knowing what dollar amounts you will receive at retirement. You must also know certain information about each source of retirement income, such as how it will be taxed in your retirement years.

One way of analyzing your retirement sources is

by dividing them by periodic income and lump-sum assets upon retirement. The latter would supplement the former to the extent that further retirement income is needed.

Table 2.1 details the sources of periodic income, showing their tax characteristics at retirement and other features. Social Security and defined-benefit plans will begin paying at retirement age once the retiree has given proper notice. Individual annuities bought with personal savings will begin distributing the money based upon the initial distribution date specified in the annuity contract. Note that tax-deductible retirement accounts [which include, but are not limited to, traditional IRAs, SEP IRAs, 401(k) plans and 403(b) plans] are listed as a periodic income source after age 73, since you are required to start distributions from them at this time.

Table 2.2 highlights sources of lump-sum assets at retirement. This would consist of personal savings you have accumulated through the years, as well as lump-sum distributions from employer-sponsored contributory plans. The table also indicates tax characteristics at retirement and the likely order of use as income sources to maximize tax characteristics. In most cases, taxable savings should be used first for retirement income, as long as your marginal tax rate exceeds the capital gains tax rate. However, decisions on initiating withdrawals from traditional IRAs and lump-sum retirement distributions must be made carefully to avoid distribution and taxation until the retiree is forced financially to begin the process.

What steps should you take to beef up your sources?

FOR OLDER WORKERS

(for instance, those in the 55 to 60 age group):

- You cannot do very much about your Social Security or defined-benefit sources, which at least will probably be there for your retirement. The only aspect of Social Security you will need to examine is whether you can wait

to collect your benefits at the normal retirement age or whether you need the reduced benefits that are currently available at age 62. Many people retire from their jobs in their early 60s and find that they must elect early Social Security benefits to supplement their income. Not doing the necessary arithmetic well beforehand can result in an incorrect decision.

- If you expect to work for several more years, maximize your use of a 401(k) and choose investment options that offer some growth of capital with moderate risk. An aggressive stock fund should only be used for assets you will not need in the first 10 years of retirement because of the potential of a big downward market move.
- Personal savings should be maximized, but a caveat is required regarding tax-free securities: If you plan to hold them while you are collecting Social Security, remember that you must include all of your tax-free income when calculating the possible tax on Social Security benefits.

FOR YOUNGER WORKERS

- Realize that you must place a far lower reliance on Social Security and defined-benefit dollars for retirement.
- The significance of 401(k) plans means that you must make the most of these plans, contributing the maximum amount that you can and investing for the long term. This means equity investment, especially growth stock vehicles if they are available.
- Personal savings must be maximized to make up for the diminished dollars from Social Security.

The changing mix of retirement income sources necessitates that each investor explore his personal financial circumstances and plan accordingly. What was true for former and current retirees may not be true for future retirees.

Investing Your Retirement Assets

Achieving a comfortable lifestyle in those golden retirement years can be a daunting objective these days. Retirements will last far longer than in the past. However, the task is not insurmountable. Knowing how to invest your savings will go a long way in helping you meet your retirement goals.

Most individuals, though, will also be saving for other goals during their lifetimes—for instance, a house, or tuition for their child’s education. The most efficient investment portfolios are based on an overall approach that examines the risk and return potential of your total portfolio, not just the individual parts. That means looking at your investable assets as a whole, including those that may be in a retirement account such as an IRA or an employer-sponsored 401(k) plan, as well as other savings.

Your total investment portfolio should match your investment profile, which includes your risk tolerance, your return needs, time horizon and tax exposure. To structure the portfolio, the process starts at the top and works its way down, first allocating among the major asset categories, then within each of those asset categories.

A Diversified Portfolio: Asset Allocation

The first portfolio task faced by any individual is to set up an overall framework for the investment of your portfolio. This framework is built around your own personal investment profile, taking into consideration your return needs and your tolerance for risk. Another term for this is asset allocation, which consists of dividing your portfolio up among the major asset categories of stocks, bonds and cash.

Although asset allocation may seem simple—after all, you are only choosing among three categories—the decisions you make here will have a far greater impact on your overall portfolio return

than any other more specific decision that you may make about your portfolio (assuming, however, that you follow basic investment principles in your other decisions, the most important of which is that you remain diversified among and within the various investment segments).

How does one set up an investment framework?

The first step is to understand how the various aspects of your personal profile can affect your investment decisions. The most important considerations are: your tolerance for risk, your return needs and your time horizon. Here’s how your personal investment profile is likely to look:

RISK TOLERANCE

The amount of risk you are willing to take on is important because if you take on too much risk, you could panic and abandon your plan; usually this occurs at the worst possible time.

The best measure of risk is to ask yourself how much of a loss you can stomach over a one-year period without bailing out of your investment plan. In general, investors with a low tolerance for risk can sustain losses of no more than 5% over a one-year time period; investors with a moderate risk tolerance can withstand total losses of between 6% to 15%; and investors with a high risk tolerance can withstand losses of 16% or more annually.

Individuals in their working years and saving for retirement can be more tolerant of risk because they are not relying on their portfolio for income, and because they have time to rebuild a portfolio should a significant loss occur. Investors closer to retirement tend to become less tolerant of risk.

Whatever your own tolerance for risk may be, it is important not to have zero tolerance—some downside risk must be tolerated in order to incorporate a growth element into the portfolio to sustain its real value against the eroding effects

TABLE 3.1

The Personal Investment Profile

Factors	Range
Risk Tolerance: How much of a loss can you stomach over a one-year period without abandoning your investment plan?	• Low: 0% to 5% loss • Moderate: 6% to 15% loss • High: 16% to 25% loss
Return Needs: What form of portfolio return do you need to emphasize: a steady source of income, growth or a combination?	• Income: Steady source of annual income • Growth/Income: Some steady annual income, but some growth is also needed • Growth: Growth to assure real (after inflation) increase in portfolio value
Time Horizon: How soon do you need to take the money out of your investment portfolio?	• Short: 1 to 5 years • Long: Over 5 years

of inflation. Higher growth, and therefore higher return, can only be achieved by taking on higher risk.

RETURN NEEDS

This refers to the type of portfolio return you need to emphasize: A steady source of annual income, a high but variable growth potential, or a combination of the two. Determining your return needs is important because of the trade-off between income and growth: The price for a steady annual payment is lower growth potential.

Younger investors tend to need only growth, while those nearing retirement may have a combination of growth and income needs. In any portfolio, some growth is needed to ensure that the value of your portfolio keeps pace with inflation; the minimum growth needed to do this would be the expected inflation rate.

Growth investments also needn't be ruled out when considering income needs. Dividend income

is usually lower than bond income at any given point in time, and dividends are also less assured than bond yields, but the long-term average is not unattractive, and that yield is a percentage on an increasing amount, since the underlying value of the stock will grow.

TIME HORIZON

Your time horizon starts whenever your investment portfolio is implemented and ends when you will need to take money out of your investment portfolio. The time horizon is important because stocks are very volatile over short periods of time and are therefore inappropriate as short-term investments. In general, a short-term time horizon is less than five years and a long-term time horizon is over 10 years.

For most younger investors saving for retirement, the time horizon is long-term.

However, even young investors may have a short-term time horizon for a portion of savings—if, for

TABLE 3.2

Risk and Return Characteristics for the Three Major Asset Categories

	Total Annual Return	Average Annual Appreciation	Average Annual Income	Downside Risk
Stocks	10.1%	6.1%	4.0%	(43.3%)
Bonds	5.2%	0.2%	5.0%	(26.1%)
Cash	3.2%	0.0%	3.2%	0.0%

*Domestic large-cap stocks, long-term government bonds and U.S. Treasury bill returns used.
Source: Ibbotson SBI 2023 Classic Yearbook, data from 1926–2022.*

instance, saving for the down payment on a house. The short-term horizon encompasses liquidity needs. Cash provides a liquidity pool; to the extent that resources are for more immediate needs, this section of the portfolio should be increased to avoid any necessity to sell long-term investments unexpectedly.

Table 3.1 summarizes the personal investment profile factors.

Portfolio Combinations

The next step is to examine various possible portfolio combinations to see how they might fit your personal investment profile. To do this, you should examine the risk and return potential characteristics of these combinations.

Table 3.2 presents risk and return characteristics for the three major asset categories. The figures are based on long-term annual averages for total return, annual capital growth and current yield, but it is important to keep in mind that these are long-term averages and significant year-to-year variations can be expected to occur. Asset prices can also move in long-term cyclical trends and may experience a 10-year period where returns are notably different than the historical averages. Thus, the long-term averages provide a guide but in no way guarantee what future returns will look like.

Investors concerned about investment losses should look at the downside risk column on the right-hand side of Table 3.2. The figures in this column are based on historical volatility and show how much could potentially be lost over a one-year holding period during severe bear market conditions.

To help judge your tolerance for risk, use the downside risk figures as a guide to how much of a loss you can stomach. The average annual returns, broken down between growth and income, can be used to help assess your growth and income needs. Downside risk also serves as a guide to your time horizon, illustrating the risk involved with short-term time periods.

What do the figures show?

- Stocks contain the only real growth element, but this is achieved at high risk, with the possibility of a significant loss (–37.0%) during bear markets. This assumes that you are investing in a well-diversified portfolio of stocks. Though losses were larger during the 2008 financial crisis, the stock market fared better during all other bear markets occurring since the Great Depression.
- Bond investments, and to a lesser extent cash (money market funds), offer steadier sources of income but virtually no potential for growth.

TABLE 3.3

Risk and Return Characteristics for Combination Portfolios

Portfolios (stocks/bonds/cash)	Total Annual Return	Average Annual Growth	Average Annual Income	Downside Risk
Conservative (40%/40%/20%)	6.8%	2.5%	4.2%	(25.2%)
Moderate (60%/30%/10%)	7.9%	3.7%	4.2%	(30.0%)
Aggressive (90%/10%/0%)	9.6%	5.5%	4.0%	(35.9%)

- Cash investments, with no downside risk, offer liquidity and the ability to temper the overall downside risk of a portfolio. This component should be used for short-term investment horizons. On the other hand, the risk/return equation increasingly favors stocks over longer holding periods. In Table 3.2, the worst-case scenario for a one-year period is illustrated but historically, the longer the holding period, the less likely you are to sustain a substantial loss in a stock portfolio. In other words, the worst-case scenario for stocks decreases for longer holding periods, and particularly for holding periods longer than five years.

The three major asset categories can be combined to produce any number of portfolios that can meet the needs of any investor profile. Table 3 presents the risk and return potential characteristics of three possible combinations.

How are these numbers derived?

The averages for each category in Table 3.2 are multiplied by the percentage allocated to each category and then added together. For instance, the conservative portfolio consists of 40% in stocks, 40% in bonds and 20% cash. The average annual return is:

$$(40\% \times 10.1) + (40\% \times 5.2) + (20\% \times 3.2) = 6.8\%$$

The downside risk for the combination portfolios assumes the worst-case scenario: that all three categories are down at the same time, a very conservative assumption that diversification has failed.

The conservative portfolio emphasizes bonds for an average annual income of 4.2%, while the 50% commitment to stocks provides a growth element of 3.1% and also allows the income component to keep pace with inflation. The downside risk of -25.2% is the lowest of the three portfolios, close to the moderate range.

The second combination provides a more moderate mix that increases the stock component to 60%, decreases the bond component to 30% and has 10% in cash. This provides a similar level of income as the conservative portfolio, but it provides at least a minimum of real growth in portfolio value, which also allows the income component to grow in real terms. The price is an increase in downside risk from the first combination.

The aggressive portfolio consists of 90% in stocks and 10% in cash. It provides less income, but the growth potential is quite large and more than makes up for the reduction in steady income with a total return of 9.6%. This average annual total return provides real (above inflation) growth and allows the income component to grow as well. However, the price is an even steeper rise in downside risk—a loss of 35.9% in the worst-case

scenario. Alternatively, 10% could be shifted from cash to bonds to increase income with only a slight increase in downside risk.

The sample portfolios here are simply examples; there are any number of combinations that are available to meet the various investment profiles. You need to decide for yourself which combination best suits your needs and risk tolerance.

Retirement vs. Taxable Investments

In our current tax structure, “retirement” account is a misnomer. That is, you should not think of your assets as consisting of “retirement” savings and “regular” savings; instead, think of your assets as consisting of a tax-deferred portion and a taxable portion.

The question of where you should invest “retirement money,” whether it be in a 401(k) plan, 403(b) plan, IRA or some other retirement account, is really a tax-planning decision that is determined after you have decided on the composition of your total investment portfolio. Once you have decided on your portfolio composition, you can then allocate the chosen investments in such a way as to minimize taxes. Of course, if you are in an employer-sponsored plan, your investment choices will also be limited by the selections provided by your employer. But assuming the selections are satisfactory and cover all investment categories, the decision comes down to taxes.

At first glance, the decision as to which kinds of investments to allocate to taxable and tax-deferred accounts would appear to be simple: Shelter the investments generating the higher amount of annual taxable income, and put those investments that generate gains into taxable accounts.

When it comes to taxes, however, nothing is ever simple.

Any investment with high annual returns—whether from income, dividends or realized capital gains—benefits from deferring taxes, and the longer the deferral, the more those benefits are able to compound.

Taxes in tax-deferred accounts are deferred until the assets are withdrawn, at which time they are taxed as income at ordinary income tax rates. In the case of investments with capital gains, the advantage of the lower capital gains tax rate is lost if the asset is placed in a tax-deferred account. However, the advantages of deferring taxes are strong, and when allowed to compound over long time periods—15 to 20 years—they can overwhelm higher tax rates that must be paid on withdrawal for many investors.

The best of both worlds, of course, is an investment in which you can defer paying taxes, but which is then taxed at the capital gains rate. This can be accomplished if you hold individual stocks, since you have complete control of the timing decision as to when to sell and realize gains. Many individuals, though, do not hold onto individual stocks for time periods as long as 15 to 20 years.

Most stock mutual funds—even those that have very low portfolio turnover—produce at least some annual distributions. Studies indicate that even low distribution levels on an annual basis tend to tip the scales in favor of tax-deferred accounts for high-returning stock mutual funds. (Exchange-traded funds (ETFs) tend to be more tax-efficient, but can still produce taxable events.)

As a rule of thumb, a tax-efficient portfolio is allocated as follows:

- The tax-deferred portion consists of higher-returning investments. Thus, if you hold both stock and bond mutual funds, the stock funds (both mutual funds and ETFs) should be allocated to the tax-deferred portion since they tend to produce much higher average annual rates of return, even though bond funds tend to have larger annual distributions. If you hold several kinds of stock funds, those that tend to have higher average annual rates of return should be allocated to the tax-deferred portion—for instance, if you hold both aggressive growth and equity-income funds, the aggressive growth funds should be allocated to the tax-deferred portion, since they tend to produce higher annual returns.

- The taxable portion consists of lower-returning investments, such as balanced funds and bond funds; investments in which you have complete control over the timing decision and that you are likely to hold onto for long time periods, such as long-term individual stock holdings; and investments with built-in tax shelter advantages, such as municipal bonds.

In addition, there are a number of investments that should not be held in a retirement account. These include:

USE OF LEVERAGE

Be aware that in an IRA, any interest, dividends, rents, etc., will be taxable to the extent that it is generated by assets acquired or improved through the use of debt. This includes the purchase of publicly traded shares of stocks or bonds on margin.

COLLECTIBLES

If you invest in collectibles using IRA dollars, the purchase will be deemed a fully taxable distribution subject to the 10% penalty tax (assessed on IRA distributions made prior to your age 59½, with some limited exceptions). “Collectibles” include the following: art, gems, musical instruments, rugs, stamps, historical objects, antiques, coins, wines or other collectible alcoholic beverages, metal or any other item of tangible personal property the IRS determines to be a collectible.

There are exceptions. Certain bullion coins issued by the U.S. (generally the American Eagle gold, silver and platinum coins) and any coins issued by any of the states are not collectibles. Also gold, silver, platinum and palladium bullion are not considered to be collectibles when the metal equals or exceeds the minimum fineness required under a regulated futures contract and is in the physical possession of a qualified trustee.

MUNICIPAL BONDS

The primary benefit of municipal bonds—including those in tax-exempt bond mutual funds—is that their interest payments are exempt from federal (and possibly state) income taxes. Because of this benefit, the interest rates earned are less than what could be earned on a taxable bond with

similar characteristics, such as term and quality. Putting a municipal bond into an IRA eliminates the tax-exempt nature of the interest, so you receive a lower rate of interest with no tax advantage. Although tax-deferred, the earnings will be fully taxable upon distribution from the IRA.

ANNUITIES

Insurance company annuities allow for the deferral of tax on earnings from these investments by virtue of special income tax provisions. In return for this benefit, the investor makes a long-term commitment to the insurance company and may pay fees in excess of alternative investment options. Obviously, if the primary benefit of the annuity is its tax-deferred status, it loses some appeal as an IRA investment. When non-IRA assets are available for investment, it would be best to purchase the annuity outside, rather than inside, the IRA. If non-IRA assets are not available, review carefully the purported benefits of such an investment inside your IRA.

Conclusion

Here are some points to keep in mind when developing an investment plan for your retirement savings:

- First, develop an investment plan for all of your investable assets, based on your own needs and tolerance for risk.
- A commitment of at least 40% in stocks will most likely be needed in any portfolio to provide growth and prevent loss in real terms of the value of your portfolio. However, the stock portfolio must be adequately diversified and include some commitment to the stocks of smaller firms, as well as international stocks.
- Downside risk is a good way to judge risk tolerance, but keep in mind that some downside risk must be tolerated to allow a growth component in your portfolio.
- Bonds provide income but no growth component. They also produce some downside risk. This downside risk can be reduced by keeping maturities on the shorter end (five to

seven years) of the spectrum.

- Cash should be used to provide enough liquidity so that you are not forced to sell investments at inopportune times.
- Cash can also be used to moderate the downside risk introduced by a large stock component.
- Try to shelter investments with the highest returns in tax-deferred retirement accounts, such as IRAs and 401(k) plans.
- Investments with lower returns should be relegated to the taxable portion of your portfolio.
- Investments with built-in shelters, such as municipal bonds, and short-term liquid investments that are set aside for emergencies should never be placed in a tax-deferred retirement account.

Investing in 401(k) Plans

The majority of corporations now offer employees the ability to participate in a defined-contribution plan, known better as a 401(k) plan, in lieu of defined-benefit plans such as pensions. The moniker 401(k) is a reference to the section of the Internal Revenue Code that created the plan. A similar plan, the 403(b), is often offered to employees of non-profit organizations.

Whereas pension plans define the type of compensation an employee can expect in retirement, 401(k) plans do not. Rather, the ultimate benefits that are paid out depend on the aggregate amount of contributions made, the time period and consistency of making those contributions, and the performance of the funds the contributions are invested in. These important decisions are made by the employee, even when a plan has a default contribution and allocation option.

Some surveys indicate that many employees don't fully understand the advantages these plans can offer. On the other hand, there are occasions when certain disadvantages outweigh the advantages to some employees.

Let's look at the advantages of these retirement plans and when you should—and in some instances, should not—participate.

Tax-Preferred Retirement Savings

One of the most important advantages of a 401(k) plan is tax-deferral on both contributions and earnings.

Contributions to a 401(k) plan by the employee are typically made on a pretax basis. Pretax contributions are those that are taken from your salary before income taxes for the year are determined. The result is a lower tax bill in the year that contributions are made. (Some companies offer a Roth 401(k) option, which allows employees to contribute aftertax dollars.)

Contributions to a traditional 401(k) plan are not tax-free, however. Rather, you pay taxes when the money is withdrawn from the plan, usually at retirement. In other words, taxes on your contributions and on the earnings (interest, dividends and capital gains) are deferred. However, since the contributions are made pretax, you can invest more money than you would be able to on an aftertax basis without affecting your actual take-home pay.

For example, let's assume that you are single and earn a salary of \$75,000 a year and that you plan to contribute \$7,500 to your 401(k) plan this year. The W-2 form you would receive for that tax year would list an income of \$67,500, rather than \$75,000; as a result, your tax bill, assuming a 22% tax bracket, would be lower by \$1,650 ($\$7,500 \times 22\%$) than if you had not made the contribution.

If you invest that same amount of money each year, earning 8% annually, for 20 years, it would grow to \$370,672. If you then withdrew the money from the plan, you would owe \$81,548 in taxes ($\$370,672 \times 22\%$) for an ending value of \$289,124.

What if you contributed to a Roth 401(k) instead? You would only have \$5,400 to invest since you would have had to pay taxes on the \$7,500. After 20 years, the value of your portfolio would be \$289,124. You would be able to withdraw this amount tax-free (and without penalty if you are at least age 59½) because you paid the taxes on the contributions up front.

[The Roth 401(k) may still be preferable if you think your marginal tax rate will be higher in the future, you want to limit how much of your Social Security benefits are taxed and/or you want to avoid having to falling into a higher Medicare premium income bracket. Note that you must wait at least five years after making your first contribution to the Roth account to avoid owing taxes on any earnings on your contributions.]

TABLE 4.1**401(k) Plan Accumulation vs. Taxable Savings**

(\$7,500 pretax salary invested annually; 8% pretax rate of return; 22% tax bracket)

Number of Years	401(k) Contributions*		Taxable Savings**	Difference in Savings
	Before Taxes	After Taxes		
5	\$47,519	\$37,065	\$35,203	\$1,862
10	\$117,341	\$91,526	\$82,848	\$8,678
15	\$219,932	\$171,547	\$147,334	\$24,213
20	\$370,672	\$289,124	\$234,611	\$54,513
25	\$592,158	\$461,883	\$352,736	\$109,148
30	\$917,594	\$715,723	\$512,611	\$203,112
35	\$1,395,766	\$1,088,698	\$728,993	\$359,704
40	\$2,098,358	\$1,636,719	\$1,021,855	\$614,864

*Accumulations are not subject to any early withdrawal penalties.

**Assumes annual taxation of all earnings, a 5.76% aftertax return; if savings were invested in instruments that allowed some deferral, such as those generating long-term capital gains, taxable savings would be higher.

What if you don't contribute to a 401(k) plan but instead saved in a traditional brokerage or mutual fund account money each year? Again, you would only have \$5,400 to invest, since you would have had to pay taxes on the \$7,500. In addition, your 8% annual return could turn into a 6.2% aftertax return, since you may have to pay taxes on the earnings, such as dividend income, each year. (If your investment is in a vehicle that produces capital gains, where taxes can be deferred and rates are lower, your aftertax rate would be somewhat higher. It would be lower if you incurred interest income that is subject to the higher ordinary income tax rate.) After 20 years, your investment would grow to \$234,611 (assuming the 6.2% after-tax rate).

The \$54,513 difference represents the real advantage of deferring taxes on both income and earnings. Table 4.1 illustrates the differences over various time periods, assuming a \$7,500 pretax annual investment, an 8% pretax rate of return and a 22% tax bracket.

The tax-deferral aspect also gives you flexibility to determine the best time to pay the tax, with the possibility that when you eventually do pay taxes, it will be at a lower rate.

Employer Matches and Other Advantages

The other major advantage of many 401(k) plans is employer-matched contributions. For instance, an employer may contribute \$0.50 for every \$1 that you contribute to the plan. This is an obvious advantage—you are earning 50% on your contribution before you have even invested it anywhere.

This advantage depends in part on any cap the employer may have on the match. Some employers will match your contributions up to certain percentage amount, based on your salary. At a minimum, contribute enough to maximize the employer match.

The advantage also depends on the employer's

vesting requirements. Vesting is the right an employee gradually acquires to receive employer-contributed benefits, and is based on the length of time employed. The faster the vesting period, the more advantageous the employer-matched contribution is, unless you plan to stay with the company (or have been with the company) for the full vesting time period.

There are several other important advantages offered by 401(k) plans. They include:

FLEXIBILITY

You can determine the amount you are able to contribute, and you make the decisions as to where your money is invested. Most plans permit periodic transfers among the available investment choices.

PORTABILITY

If you should leave your employer, any contributions you have made to your plan, as well as their earnings, are yours; vested contributions made to your plan by your employer are also yours. At this point, if you transfer these contributions to a new employer's plan or into an IRA, no penalties are incurred and no taxes are due until you take a distribution (make sure you understand the rollover rules, however, particularly those regarding withholding, since mistakes will incur costly penalties). On the other hand, if you take a distribution (by not transferring to a new employer's plan or an IRA), taxes will be due and you will have to pay a 10% early distribution penalty if you are below age 59½.

PERIODIC INVESTING MADE EASY

An automatic deduction from your paycheck allows you to invest right from the start without any action on your part. And periodic payments allow you to gradually build up your investment without having to make big financial sacrifices. The benefits of starting an investment program early are considerable, due to the power of compounding. When you invest, your money produces interest or capital gains; those earnings can then be reinvested so that you receive earnings on your earnings. The longer you allow the compounding effect to work, the more your money earns on its own.

Should You Participate?

The advantages described previously are strong arguments in favor of participating in your company's 401(k) plan. Tax-deferral and automatic contributions are compelling reasons that will enable you to build your retirement nest egg much more quickly than if you were to do so on your own. An employer-match program, if your employer offers one, is also a powerful incentive to participate. For most individuals, the positives outweigh the negatives. But you still should be aware of some of the disadvantages of 401(k) plans.

First, you have limited access to your money for a long period of time, and the immediate access that you do have could come at a high price—the 10% penalty for early withdrawal. This penalty, of course, works against the advantages of tax-deferral.

For the most part, your 401(k) plan money will remain in the plan until you retire or leave the company. Once you reach age 59½, you can receive distributions from your 401(k) plan without penalty, although you must pay taxes on the distribution.

If you leave the company and you have not reached 59½, you can take a lump-sum distribution of your 401(k) plan money to spend as you wish but only by paying a 10% early withdrawal penalty and, of course, taxes; you can avoid the penalty only by rolling your money over into an IRA or a new employer's qualified plan.

Access to your 401(k) money when you remain with your employer isn't entirely restricted, just limited. Some plans allow participants to borrow funds from their 401(k) plan assets, usually at an intermediate-term market rate. Borrowers are in effect loaning money to themselves and repaying the loan into their 401(k). However, loans that are not repaid within the restricted time period are considered distributions, with taxes and a 10% early withdrawal penalty due. You will also miss out on investment returns for the period of time the loan is outstanding, a second and potentially big penalty for taking a loan.

TABLE 4.2

Return Needed From Taxable Savings to Match Aftertax Accumulation in a 401(k) Plan

Tax Rate	Expected Return From a 401(k) Plan*		
	6.0%	8.0%	10.0%
10.0%	6.7%	8.9%	11.1%
12.0%	6.8%	9.1%	11.4%
22.0%	7.7%	10.3%	12.8%
24.0%	7.9%	10.5%	13.2%
32.0%	8.8%	11.8%	14.7%
38.8%	9.8%	13.1%	16.3%
40.8%	10.1%	13.5%	16.9%

**Assumes 401(k) plan accumulations are not subject to the 10% penalty for early withdrawal. Also assumes returns from taxable savings are taxed annually at short-term capital gains rates.*

***Top two tax brackets include 3.8% net investment income (NII), which applies to single and joint filers with modified adjusted incomes above \$200,000 and \$250,000, respectively.*

Some companies will permit withdrawals from a 401(k) plan due to severe financial hardships. However, anyone requesting part or all of their dollars under this clause must show their employers that they have exhausted all other non-retirement financial resources. These withdrawals are also subject to the 10% early withdrawal penalty, and taxes must be paid on the distribution.

These features are comforting for short-term emergencies. However, to take full advantage of your employer's 401(k) plan, you should consider money invested in the plan to be long-term savings.

A second possible drawback is that you are limited to the investment choices provided by the employer. This may or may not be a negative. Most employers provide at least one form of investment in three broad asset categories—cash, bonds and stocks. And many employers provide a number of

choices within those categories.

Costs are also an issue: Some 401(k) plans come with comparatively high fees and only offer funds with high expense ratios. Though disclosure has improved, it may require effort to determine how expensive the plan is. The expenses will reduce the investment returns you will realize each and every year you are in the plan.

What if you are uncomfortable with or strongly dislike your employer's plan? For instance, if you have only limited funds for savings, and you dislike your employer's stock fund selection, would you be better off investing your limited funds in a taxable account, or are you better off contributing to an employer plan even if you feel it will provide lower returns?

Clearly, in this instance there is a trade-off between the tax-deferral advantages of the 401(k) plan and the higher returns you may feel you can find elsewhere. A rough guide to this trade-off is provided in Table 4.2, which shows the return you would need to earn in a taxable savings account (assuming all earnings are taxed as income each year) to accumulate the same amount as the after-tax value of a 401(k) plan that has lower expected returns.

If your taxable savings were invested in instruments that produce primarily long-term capital gains where taxes can be deferred, the necessary rate of return would be somewhat less than illustrated. The same logic would apply if lower-cost investment options can be found outside of your employer's plan. The table assumes that the 401(k) plan accumulations are not subject to the 10% early withdrawal penalty.

Realize that the table does not take into consideration any employer-matching program. Matching contributions have the potential to offset lackluster investment returns and high expenses, and tilts the odds more heavily in favor of 401(k) plans.

The Bottom-Line Decision

Should you participate in your employer's 401(k) or 403(b) plan, or Roth versions of such plans? The

advantages are very strong and include:

- Your contribution to a 401(k) or 403(b) is pre-tax and reduces your taxable income in the year that the contribution is made. You will, of course, eventually have to pay taxes.
- The tax-deferral aspect 401(k) or 403(b) plans allows you to build up your retirement savings more quickly than otherwise.
- Contributions to Roth 401(k) and Roth 403(b) plans are made with aftertax dollars, but withdrawals are tax free if made after age 59½ and at least five years after the first contribution was made.
- Both types are an easy form of periodic investing that allows a gradual but steady buildup of your savings over time.
- If your company matches your contributions, you are getting a free boost from your employer.

What would be reasons not to contribute to the plan?

- Liquidity: You are sure that you will need the money to spend sometime in the near future (for instance, in five years or less), or
- You are uncomfortable with all of the investment options and feel that you can earn a better return in a taxable savings account, even after taking taxes into consideration (and assuming there is no employer match).
- The plan comes with high fees and the funds offered have high expense ratios.

Conclusion

This guide is not meant to be inclusive of every aspect for every retirement planning situation. Our goal is to provide you with helpful information so you have the confidence to create a long-term plan that will be successful.



“The American Association of Individual Investors is an independent nonprofit corporation formed in 1978 for the purpose of assisting individuals in becoming effective managers of their own assets through programs of education, information and research.”

AAII is not a registered investment adviser or a broker/dealer. Readers are advised that articles are provided solely for informational purposes and should not be construed as an offer to sell or the solicitation of an offer to buy securities. The opinions and analyses included herein are based on sources believed to be reliable and written in good faith, but no representation or warranty, expressed or implied, is made as to their accuracy, completeness, timeliness or correctness. Neither we nor our information providers shall be liable for any errors or inaccuracies, regardless of cause, or the lack of timeliness of, or any delay or interruptions in the transmission thereof to the users. All investment information contained herein should be independently verified. We make no representations or warranties that any investor will, or is likely to, achieve profits similar to those shown, because past, hypothetical or simulated performance is not necessarily indicative of future results. Investment information provided may not be appropriate for all investors. Investment information is provided without consideration of your financial sophistication, financial situation, investing time horizon or risk tolerance. Before making an investment decision, you should consider your circumstances and whether the information on our content is applicable to your situation.