

CHAPTER 1

The Importance of the 401(k) Plan

Retirement in the United States is getting more attention every year. The reasons include the baby boom generation reaching retirement age, people spending more years in retirement, rising retirement expenses, and the shift from employer-sponsored defined benefit (DB) plans to defined contribution (DC) plans.

In addition, the traditional sources of retirement security, *government*, *employer*, and *individual* are all straining under the weight of competing economic priorities, causing us to reexamine how these sources interact to provide a secure retirement. Emerging at the center of the new retirement architecture in the United States is the 401(k) plan.

BABY BOOMERS HAVE REACHED RETIREMENT AGE

The baby boom generation—defined by the U.S. Census Bureau as everyone born in the years 1946 through 1964, is having a profound effect on the retirement landscape in the United States. The baby boom generation has left its imprint on each life stage it has passed through. Now it is retirement's turn. In 2008, there were approximately 44 million Americans in the 10-year age cohort from age 45 to 54.¹ For comparison, the 10-year age cohort from age 25 to 34 numbered approximately 40 million. That comparison might not seem dramatic, but keep in mind that the younger age cohort will continue to shrink in size over the next 20 years because of normal mortality. For additional comparison, the current 10-year age cohort from age 65 to 74 number approximately 19.5 million.

The baby boom effect on retirement is multifaceted. Boomers are transitioning from net savers to net spenders as they pull dollars out of their retirement accounts rather than putting new contributions in; they are looking for help for the first time with ways to ensure they don't outlive their accumulated wealth; there will be an increase in demand for health care products and services; and a higher proportion of the population in

retirement will cause the Social Security retirement dependency ratio to increase dramatically.

PEOPLE ARE SPENDING MORE YEARS IN RETIREMENT

People are spending more years in retirement because they are retiring earlier than planned and living longer than in the past. While the normal retirement age most people think of is 65, research shows that many are retiring earlier. According to the Employee Benefit Research Institute's (EBRI) 2010 Retirement Confidence Survey (RCS), 28 percent of the individuals surveyed who were still working (workers) indicated that they planned on retiring before age 65. However, of the individuals surveyed who were already retired, 61 percent said they actually retired before age 65. An excerpt from the survey report sheds some light as to why people are retiring earlier than planned.

The RCS has consistently found that a large percentage of retirees leave the work force earlier than planned (41 percent in 2010). Many retirees who retired earlier than planned cite negative reasons for leaving the work force before they expected, including health problems or disability (54 percent); changes at their company, such as downsizing or closure (28 percent); and having to care for a spouse or another family member (19 percent). Others say changes in the skills required for their job (16 percent) or other work related reasons (11 percent) played a role. Some retirees mention a mix of positive and negative reasons for retiring early, but just 5 percent offer only positive reasons.

In addition to retiring earlier than planned, increased life expectancy is causing the number of years people spend in retirement to be longer than in the past. Around the year 1900, average life expectancy at birth in the United States was just over 49 years. It has been increasing ever since. Measured every 10 years (based on the 10-year censuses that we have), it finally passed age 70 in 1970, hitting 70.8 years. By the time of the 2000 census, it had reached 76.9 years.

For retirement planning purposes, we are also interested in the average number of years a person is likely to live once they've reached retirement age. In 1900, a survivor to age 65 could expect to live an additional 11.9 years (on average). In 1970, the average remaining life expectancy at 65 had increased to 15 years. In 2000, this figure was 17.9.²

It is a fact that people are spending more years in retirement. The effect this has on retirement planning is clear. Either spending rates must come

down to allow retirement assets to last longer or additional wealth must be accumulated to fund the same standard of living for these additional years.

EXPENSES IN RETIREMENT ARE INCREASING

If a person wishes to maintain their pre-retirement standard of living in retirement, it will usually require less annual income in retirement than in pre-retirement. The reason is that there are some expenses that go down in retirement such as transportation, taxes, clothing, and savings for retirement. Aon Consulting, in conjunction with Georgia State University, has conducted a Replacement Ratio Study every few years since 1980. This study examines the federal government's Consumer Expenditure Survey (CES) data to determine how people at various income levels spend their income. By examining these data, the study determines what percentage of a person's pre-retirement income they need to replicate their pre-retirement standard of living once they stop working and retire. The 2008 edition of this study concludes that a person making an annual salary of \$30,000 per year would need 90 percent of his pre-retirement income to maintain the same standard of living. This percentage is termed an *income replacement ratio*. Someone making \$90,000 per year would require an income replacement ratio of 78 percent.

These income replacement ratios are based on a snapshot in time. As such, they do not project changes in spending patterns or variances in expense increases among different expense categories. One area of expense that is likely to increase in the future for retirees is health care. We know anecdotally that health care costs have been increasing at rates of two and three times the rate of inflation in recent years, and retirees spend a higher percentage of their income on health care than pre-retirees. So, what might these income replacement ratios be if we factored in higher health care costs in the future? When the income replacement ratios are recalculated assuming health care costs will increase in retirement by an additional \$400 per month (which represents the combined costs of Medicare Parts B and D premiums, and an amount for supplemental coverage) the \$30,000 per year individual's ratio increases from 90 percent to 102 percent. The \$90,000 per year individual's ratio increases from 78 percent to 82 percent.

THE SHIFT FROM DB TO DC

Over the past several decades, there has been a steady trend of shifting the risks and responsibilities associated with retirement from institutions to individuals. One of the most obvious manifestations of this trend is the shift

from DB plans to DC plans as the primary employer-sponsored retirement program. Nineteen ninety-six was the last year in which there were more assets in private DB plans than in private DC plans, when each held approximately \$1.6 trillion. Private DC plans include profit sharing, money purchase, and 401(k) plans. Governmental or not-for-profit DC plans are not included in this statistic and usually take the form of 457 or 403(b) plans. By the year 2011, it is estimated that private DC plans will hold \$4.2 trillion, while private DB plans will hold \$2.5 trillion.³

Another comparison, this time conducted by researchers at the National Bureau of Economic Review (NBER) estimates that the assets currently in DB plans versus 401(k) plans are roughly equal (at the time this chapter was written in 2010). By the year 2040, however, it is estimated that there will be four times the assets in 401(k) plans as in DB plans.⁴ For workers entering the workforce today, it is highly likely that their primary source of employer-sponsored retirement will be in the form of a defined contribution account rather than a defined benefit. We discuss later in this chapter some of the risks that are transferred to the individual as employers move from DB to DC retirement programs.

SHARING RESPONSIBILITY

There is a popular analogy comparing retirement security in the United States to that of a three-legged stool. The legs in this analogy are represented by government (Social Security), employer (employer-provided retirement benefits), and individual (personal savings). Because of the converging factors discussed at the beginning of this chapter, the three-legged stool is beginning to list to one side. Social Security is facing solvency concerns in the coming decades if changes are not made. As was stated earlier, employers are moving toward DC plans. This move shifts most of the risks associated with retirement to the individual. And finally, personal wealth accumulation is being strained because of lower personal savings rates, lower housing values (a large source of personal wealth for many Americans), and lower investment portfolio values due to the global economic downturn.

The Government as a Source of Retirement Security

Social Security is the federal government's contribution to Americans' retirement security. (We say it's the federal government's contribution even though the source of Social Security's funding is payroll taxes.) Individuals reaching retirement age just as the Great Depression was unfolding found themselves literally in the streets with no resources to maintain a decent standard of

living. As a result, the U.S. government initiated a Social Security program in 1935, the largest part of which is a retirement pension for workers reaching retirement age. Americans are dependent on Social Security, but the system may face solvency problems in the coming decades because of longer life expectancies and the sheer numbers of workers who will draw benefits as the baby boomer generation begins to reach retirement age.

At the time Social Security was enacted, the average life expectancy was about 65 years of age. More specifically, the average life expectancy of a female was 67 and 63 for a male. Coincidentally, the normal retirement age to qualify for Social Security was 65. In 1935, people spent fewer years in retirement simply because they didn't live as long after retiring as they do today. The length of time someone spends in retirement (by definition a time when no income is generated by working) greatly affects the amount of financial resources needed to fund such a retirement.

At the end of the 1930s, the average expected remaining years of life for a person at age 65 was 12.8. By the year 2000, this figure had increased to 17.9 years, for an increase of 5.1 years. This means that during this period alone, the average length of time a person aged 65 spends in retirement has increased by 40 percent.⁵

Another factor that will strain the Social Security system is the dependency ratio in the United States. The *dependency ratio* is a measure of the number of nonworking dependents relative to the number of persons of working age. When measured this way (including children and older dependents) the dependency ratio in the United States peaked in 1965 when there were 94.7 dependents for every 100 persons of working age in the United States.⁶ If we consider the dependency ratio of just older dependents, however, (which is a better indication of the burden to be borne by Social Security in the future), the ratio is estimated to increase dramatically, as can be seen in Table 7.1.

Since its inception, there have been changes to the Social Security system, partly in response to the demographic changes just discussed. First of all, the age at which a worker can start to receive full retirement benefits from the system has increased. Anyone born in 1937 or before can start receiving full retirement benefits at age 65. Workers born after that date will have to wait longer. The phase-in to older normal retirement dates gradually increases until those who were born in 1960 or after will have to wait until they are 67 to start receiving full retirement benefits from the Social Security system.⁷

Another change has been in the tax rate to which workers' wages are subjected.⁸ The Old-Age, Survivors, and Disability Insurance (OASDI) tax rate was 1 percent of wages from 1937 to 1949.⁹ In 1955, the rate was 2 percent; in 1960, the rate was 3 percent; in 1969, 4.2 percent; in 1978,

TABLE 1.1 Dependency Ratio

Year	All Dependents*	Persons 65 and Older*
1950	72.5	13.8
1965	94.7	18.2
1980	75.0	19.5
2010 (est.)	65.6	20.9
2040 (est.)	81.7	37.2
2080 (est.)	86.1	42.1

*Number of dependents per 100 persons of working age.

Source: Congressional Research Service.

5.05 percent; in 1988, 6.06 percent; and from 1990 to the present, it has been 6.2 percent.

Are these changes enough to prevent solvency problems down the road? Soon the amount of payments flowing out of the system to retirees and beneficiaries will increase dramatically relative to taxes coming into the system from workers. Eventually, the system will pay out more in benefits than it takes in from taxes. Once this happens, the system will begin to draw down on the trust surplus that has been built up from past tax revenue surpluses. If no other changes are made to Social Security (increased taxes or reduced benefits) the trust surplus will run out in the next 20 to 30 years.

Every year, every American who has paid into the U.S. Social Security system is sent a statement of benefits from the Social Security Administration. Printed on the front page of a Social Security statement from mid-2009 are the following two paragraphs:

Social Security is a compact between generations. For decades, America has kept the promise of security for its workers and their families. Now, however, the Social Security system is facing serious financial problems, and action is needed soon to make sure the system will be sound when today's younger workers are ready for retirement.

*In 2017 we will begin paying more in benefits than we collect in taxes. (A recent revision of this estimate suggests this actually may occur in 2010 due to the 2008–2009 global recession.) Without changes, by 2041 the Social Security Trust Fund will be exhausted**

*These estimates are based on the intermediate assumptions from the Social Security Trustees' Annual Report to the Congress.

and there will be enough money to pay only about 78 cents for each dollar of scheduled benefits. We need to resolve these issues soon to make sure Social Security continues to provide a foundation of protection for future generations.

The Employer as a Source of Retirement Security

In the mid-twentieth century, as the United States's economy was growing rapidly after World War II, U.S. employers competed vigorously for workers. Employee turnover was expensive and employers looked for ways to tie workers to the company. There arose an unwritten pact between employer and employee that went something like "the employer will take care of the employees, the employees will take care of the customers, and business will be good." A common feature of this pact between employer and employee became the employer-provided pension plan. The employer pension usually took the form of a defined benefit plan whereby an employee working for an entire career with the same employer would receive a significant percentage (in many cases 100 percent) of their pre-retirement income in the form of a lifetime pension. In some of these plans the benefit included annual cost of living increases for the retiree.

Before 1975, there were fewer rules governing the funding and operation of defined benefit plans. Employers could operate their plans on a pay-as-you-go basis. Profits from production of current workers could be used to fund the benefit payments promised to retired workers. As long as the worker-retiree dependency ratio was favorable, the system worked. But this system was fraught with potential problems. When business declined or the ratio between workers and retirees began to shift, employers became stuck with liabilities in excess of their ability to pay. The laws governing defined benefit plans in the United States have tightened significantly over the years. Employers are now required to meet certain funding limits. Pension liabilities of public companies that used to be less than transparent now must be fully disclosed. Investment losses experienced by pension trusts must now be made up in a shorter time frame than in the past, causing a level of funding volatility that has become unbearable for many corporations. In addition to regulatory changes, the social compact between employer and employee has eroded. Today, employers have less visibility as to what their organization will look like in the future. Without this visibility, it is often unclear what type of workforce they will need even in as little as a few years into the future. For some employers, making a long-term pension commitment to their workers seems to make less sense than it did in the past, especially given the financial challenges associated with operating a defined benefit plan.

These are some of the main reasons why employers have shifted away from defined benefit plans toward defined contribution plans. In contrast, DC plans are always fully funded. There is no pension liability for the CEO or CFO to worry about. The employer has flexibility in determining what level of benefit the company will fund. As for the employee, she no longer has to work her entire career with a single employer to realize a meaningful retirement benefit. With the exception of some relatively short-term vesting requirements, employees are free to take their entire benefit with them when they move on to the next employer. In some ways, both the employer and employee benefit from the move toward DC plans, but there are challenges as well. When moving from a DB to a DC plan, employers are shifting certain risks from themselves to the employee. In a DC system, the employee takes on a greater level of the funding, investment, longevity, and spending risks related to his retirement security.

Funding Risk In most DC plans, when employers determine their level of contribution, they do so regardless of whether that contribution is sufficient to enable their employees to reach their wealth accumulation needs at retirement. The employees, of course, can adjust their contributions each year within the limits of the law. However, unlike in a DB plan, there are no actuarial calculations in DC plans to determine the level of funding needed to reach a certain “defined benefit.” The funding risk inherent in a DC plan is therefore twofold. First, it is difficult for the employee, or the employer, to know if their contribution levels are sufficient to reach the participant’s wealth accumulation goals. Second, even if the amount were known, the individual may not have the financial flexibility to adjust her contribution year to year to stay on track.

Investment Risk In a DB plan, the consequence of plan investments experiencing lower returns than expected is the employer contributing more money to the plan. In a DC plan, the consequence is the employee must contribute more money to their account or settle for a lower final account balance at retirement. The investment outcomes, whether good or bad, are absorbed by the employee’s account. The investment risk borne by the participant is compounded in most cases by allowing participants to direct the investment of their accounts.

Longevity Risk DB plans offer longevity protection to the plan participant by offering an annuity form of benefit at retirement. Depending on the form of annuity, there may or may not be a survivor benefit when the participant dies. If the participant lives longer than expected, the defined benefit plan funds the additional cost of longevity by continuing to pay the participant

his monthly benefit. If the participant dies earlier than expected, the defined benefit plan realizes a mortality credit (which offsets the cost of those living longer than expected). This describes the pooling of longevity risk that takes place in DB plans. With a DC plan, participants don't earn a monthly benefit; they accumulate an account balance. They can spend their account in retirement as fast or as slowly as they wish, but if they live longer than expected, however, they may run out of money.¹⁰ This describes longevity risk, the risk of outliving your money. We discuss in Chapter 12 the ways a DC plan sponsor can help participants deal with longevity risk.

Spending Risk In a DB plan, participants who reach retirement have earned the promise of a monthly pension from the plan sponsor. Unless the participants elect to forgo an annuity form of benefit and accept a lump sum payment, the participants will receive their benefit in monthly installments. They are not able to take an advance on future payments or borrow against their pension (at least not from the plan itself). This process imparts a spending discipline on the retiree. With a DC plan, though, participants who reach retirement age have access to their entire account at once. They may decide to take that account and buy an annuity, which imposes the same spending discipline as the DB pension, but very few DC participants buy annuities with their accounts upon retirement. This access to their entire account balance at once introduces spending risk to the DC participant. In cases of financial emergencies, having access to more than just one month's worth of retirement wealth can be a good thing. In many cases, however, spending risk manifests itself in the inability to spend in a disciplined manner or, spending at a rate that is too fast relative to the retiree's ultimate length of life. In this second example, spending risk and longevity risk are closely related.

The Individual as a Source of Retirement Security

In our traditional view of retirement security, the individual is the third source. Just as we've seen with Social Security and employer-provided retirement, the individual has challenges as well. For all but those on the doorstep of retirement, retirement seems a distant concern. Most people have more financial needs than they can satisfy and these needs compete with saving for retirement. Unfortunately, as the funding burden for retirement has been shifted to the individual, the national savings rate has dropped considerably. Putting off saving for retirement until later in life is difficult to overcome. Inertia is one of the many behavioral challenges that we as humans are hardwired with that gets in the way of sound retirement planning.

Lower Savings Rates From 1952 to 2008, the average annual savings rate in the United States was just above 7 percent.¹¹ This savings rate is represented by the percentage of after-tax income that is not spent at the end of every year. Where this money ultimately ends up is another matter altogether and the exact method for calculating the national savings rate is always a popular subject for debate. What is important for our discussion here is not merely the absolute value of the national savings rate but how it has changed in the past few decades. For example, the average savings rate for the eight-year period from 1971 to 1978 was 9.72 percent. Thirty years later, the average savings rate for the eight-year period from 2001 to 2008 was 2.65 percent. There are two insights that might be drawn from these very different periods. First, the average for this most recent period is significantly below the long-term average of 7 percent. If personal savings becomes a more important source of retirement security in the future, a national savings rate below 3 percent is unlikely to be enough. Second, and possibly the unexpected bright side to this story, the savings rate for the 1970s might be a foreshadow of savings rates to come. If it turns out that the economic climate in the 2010s is similar to that of the 1970s, we may soon see dramatically higher savings rates than we've experienced recently.

Behavioral Challenges There is an abundance of evidence that individuals often act irrationally when making financial decisions. The field of study that looks at the psychology behind how we make financial decisions is known as behavioral finance. Daniel Kahneman, a pioneer in the field of behavioral finance, won the Nobel Prize for Economics in 2002 for "having integrated insights from psychological research into economic science, especially concerning human judgment and decision-making under uncertainty."¹² More recently still, the field has been extended even further by researchers seeking to understand which parts of the brain are involved with specific types of financial decision making: hence the name *neuroeconomics* for this new science.

What we've learned so far from these new fields of studies is that humans have decision-making tendencies that cause suboptimal outcomes in their financial lives. In other words, we often behave badly when it comes to money. Most of these tendencies are hardwired in our brains. But now that we know they exist, we need to work around them to give ourselves the best chance at reaching our financial goals. Inertia causes people to delay participation in savings programs. Too many investment choices causes choice overload, which results in lower participation and often-inappropriate investment portfolios. Overconfidence and the tendency to chase last year's best returning funds too often results in lower investment returns than the capital markets are willing to deliver.

CONCLUSION

Today and in the future, individuals will be asked to take on more responsibility for the provision of their own retirement security. It is uncertain how reliable government and employer sources will be. 401(k) plans offer individuals several advantages: automatic features such as payroll deduction and automatic enrollment that can mitigate bad behavioral tendencies; employer contributions that help with the funding burden; and tax-advantaged treatment of contributions and earnings that allows for faster and greater wealth accumulation. 401(k) plans also usually provide lower investment and administration fees than the individual would experience in a retail setting.

FOR SCREEN VIEWING IN BPA ONLY