Efficient Retirement Design
Combining Private Assets and Social Security to Maximize Retirement Resources

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Executive Summary of Efficient Retirement Design

One of the biggest economic challenges in life is saving the daunting amount of money needed to finance a comfortable retirement. There are lots of economists and advisors shouting out the need to accumulate more assets and to invest more effectively. This booklet is about a related subject - how to use your accumulated assets and your Social Security entitlement to maximize your standard of living in retirement. We want you to make the best out of what you have saved and earned and are convinced that most people are simply not following the right strategy. We find that the stakes are high and that most retirees are leaving tens of thousands, even hundreds of thousands, of dollars on the table.

In some ways, this booklet is largely about when people should commence their Social Security benefits. Today people can start their benefits anytime between ages 62 and 70, subject to certain rules. The later one starts benefits, the larger the monthly benefits. That raises the question, does it pay to start benefits at 62 or is it better to delay the commencement? It turns out that delaying the commencement of Social Security ranges from a good deal to a great deal for most people. So, here is our first finding:

**With today’s life expectancies and today’s extremely low interest rates, it is in almost everyone’s interest to delay the commencement of Social Security. For many people, delaying to 70 is the value maximizing strategy.**

Currently very few people delay Social Security even a few months. The return to delaying the commencement of Social Security is not the same for people in different circumstances. For individuals with average health status, delaying has the biggest
payoff for the higher earner within a marriage, the second highest return for single women, the third highest return for single men and the lowest return for the lower earner in a married couple. Some delay beyond 62 is usually in the interest of people in any of these circumstances, however. For folks in better than average health, the payoff for delaying commencement is even greater. With all of this in mind, we are going to list as our second finding

**Delaying Social Security commencement has the biggest payoff for the higher earner in a two-earner couple or the only earner in a one-earner couple.**

The next finding is related.

**In a two-earner couple, at least one person should collect a spousal benefit before starting their own worker benefits.**

For example, consider a two-earner couple in which the husband is aged 62 and the wife is aged 60. If both delay their worker benefits to age 70, then either the husband can start spousal benefits at age 68 (when the wife is 66) or the wife can start spousal benefits at age 66. Alternatively, the wife could start worker benefits at age 64 or earlier, allowing the husband to start spousal benefits at age 66 and delay his worker benefit to age 70.

As we have already said, deferring Social Security benefits is in the interest of single men and women in average health. But, they also should determine whether they can collect on someone else’s record while they defer. People who have been widowed or people who are divorced but were married for more than ten years, can collect survivor benefits or spousal benefits on their ex-spouse’s earnings record, all the while deferring benefits based on their own record. If they can do this, they should.
Our next finding may be surprising. Many financial opportunities today are available only to the well-off. Government support programs are often limited to low and middle income households. Well, that leads us to our next finding:

The Social Security commencement strategies we describe work equally well in terms of rates of return for people of all earnings levels.

Finally, with Social Security deferral so financially attractive, what are the means to make it happen? The two main means of financing Social Security deferral are private assets and 401(k) balances and simply working longer. The two strategies can be used in combination. For instance, consider a married couple, both age 62. They both could retire and start their Social Security benefits at 62 or the lower earner could delay commencement until age 66, the higher earner could collect spousal benefits at 66 and their own benefits at 70. We could use shorthand to call the choice 62/62 vs. 66/70. If they are in average health, with today’s interest rates the 66/70 could easily have a total present value that is $200,000 or more greater. But, the question is what income do you live on during the deferral period? At one extreme, they could go ahead and retire at 62 and live off of 401(k) assets or other accumulated assets to replace the deferred Social Security. That is a fine strategy, but it requires something like $250,000 in withdrawals from accumulated assets. At the other extreme, the lower earner could work until 66 and the higher earner until 70. In this case, the couple would enjoy the higher value of the 66/70 commencement strategy without requiring the use of pension assets at all. There are lots of in between strategies. For instance, if both members of the couple work until 66 and then retire, the cost of replacing the deferred Social Security is not roughly
$250,000 but the much more manageable $50,000. So, the last conclusion we will highlight is

**Efficient Retirement Design can be achieved with a combination of working longer and using private assets and 401(k) balances to finance the deferral period.**

We think that people have a lot to gain by getting their retirement design right. Widows would have far more resources, the children of the elderly would be less likely to have to support their parents, and retirees would enjoy a significantly higher standard of living. An extra $100,000 - $250,000 will do that for you. The amazing thing is the extra resources are there for the taking for most people but they are “leaving them on the table.”

We hope this executive summary causes you want to investigate the matter more thoroughly by carefully reading Efficient Retirement Design.

John B. Shoven

Sita N. Slavov
Efficient Retirement Design
Combining Private Assets and Social Security to Maximize Retirement Resources

John B. Shoven and Sita N. Slavov

Introduction

There has been a massive change in the private pension system over the past forty years, with traditional defined benefit company pensions being replaced by defined contribution retirement arrangements with names like 401(k), 403(b) and 457 plans. The numbers and letters in these names refer to paragraphs and subparagraphs in the federal tax code. Employer and employee contributions are typically invested in stock and bond mutual funds with the purpose of accumulating assets that will help finance a comfortable retirement. Many studies have been published urging people to contribute more to these types of accounts, extolling their tax advantages or evaluating the impact of such things as automatic enrollment features, employer matches or loan provisions in the plans. There have been very few analyses of how people should use their accumulated assets to maximize their retirement resources.

Most people participating in these plans also become entitled to Social Security at age 62. Social Security has its own set of benefit choices that need to be considered carefully in order to maximize retirement income. The purpose of this document is to help people get the most out of their combined private assets and Social Security entitlement. It is our opinion that most people are not using their resources efficiently in the sense that they could enjoy a higher income every year of their retirement with some of the strategies that we describe here. Some people could enjoy much higher income. We think that many people are simply leaving money on the table – lots of it. At the very
least, it is worth understanding what your options are before you engage in a retirement income strategy.

The traditional approach to retirement income is to commence Social Security almost immediately upon retirement and supplement the monthly Social Security deposits with private resources such as a 401(k) account. This is what most people do. It is our guess that many people don’t consider any other strategy or even know that other strategies exist. We hope to change that situation. We call this traditional strategy – immediately claiming Social Security and supplementing the resulting income with spend out plan for the private assets – a “parallel strategy.” The name indicates that all of one’s assets, from both Social Security and private sources, are simultaneously contributing to income – they are operating in parallel. We hope to show you that this approach, even if it is executed effectively, is far from efficient for people in many circumstances. The parallel strategy has one thing going for it: you don’t have to know very much about Social Security to execute it. You simply go to the local Social Security office (or get online) and start your benefits. What to do with your private assets (such as 401(k) assets) is a little more difficult. Some people spend them out in an uneven pattern over a few years and the assets don’t last for life. Others may be overly cautious and husband them for a rainy day that never comes, leaving a substantial unintended bequest. A few people purchase a life annuity so that they have two streams of money that do last for life – one from Social Security and one from a private insurance company. We find that this traditional strategy is the wrong approach for most people approaching retirement today.
The alternative that we will describe in great detail involves using private resources to delay or defer the commencement of Social Security benefits rather than to supplement them. We call this the “series strategy” in contrast to the parallel strategy. What we are suggesting is relying on your private assets (e.g. 401(k) accounts) to finance your first months or years of retirement while deferring the commencement of Social Security. Social Security benefits are increased each month one waits to commence benefits between ages 62 and 70. We will show that delaying the commencement of Social Security is an extremely good deal for people in average or better health. Exactly how good a deal depends on your marital status, your earnings record, your spouses’ earnings record if you are married, and a number of other factors. We will go through the details.

The title of this booklet, *Efficient Retirement Design*, hints that some retirement strategies are inefficient. In fact, we think that the retirement strategy followed by most Americans is inefficient. What we mean by that is that with exactly the same assets and earnings history, we think that people could be safely getting more income during their lifetime. We will also show that widows, in particular, could enjoy significantly higher standards of living. We will show cases where couples could enjoy monthly incomes that are higher by ten or more percent, with more protection from inflation and with greater benefits for the survivor (the widow or widower).

The stakes of choosing the right strategy are relatively high. In quite a few cases, the particular deferral strategies that we will describe in this booklet can raise the expected present value of a couple’s lifetime income by $150,000 or more compared to the traditional parallel strategy. Their children can also benefit dramatically in that these
strategies reduce the chances that their mom or dad will need support towards the end of life. We wouldn’t have written this if we thought there were a few pennies being left on the table. In the right circumstances, each dollar of retirement assets with our series strategies can be worth two dollars using the traditional approach. If you have $150,000 in a 401(k) account and we can show you how to have as much money to live on as someone with $300,000, then that is worth learning about. So, here we go…

We want to turn you into an informed retirement planner. To do so, we are going to start with some basics. The next section will discuss how long your money needs to last or to put it more bluntly, how long you might live. Then we will discuss life annuities and the details of Social Security. With these building blocks in place, we will give you some examples of how different kinds of families – single individuals, one-earner couples, and two-earner couples – can get the maximum value from Social Security. Some of the strategies we describe will use particular features of Social Security such as “file and suspend” and spousal benefits. You will know what these terms mean by the end of Efficient Retirement Design. Of course, if you are going to defer Social Security, you will need a source of income during the deferral period. We will describe various ways in which this can be done – for example, by using 401(k) or other retirement savings, or by working longer, either part time or full time. Even a small amount of retirement savings can be used to finance the deferral of Social Security for a short period – and a short deferral is still better than nothing. In general, we find great potential for the deferral plans. How much they can be pursued depends on your level of private assets and/or your willingness to work part time after retirement.
Social Security’s rules are complicated, and the right strategy will depend on your individual circumstances. The examples we provide here are stylized, and they don’t capture all of the complexities of Social Security. For example, your decision of when to claim Social Security may affect your Medicare premiums. Our examples are merely meant to illustrate how deferral strategies might work. We want to get you thinking about this issue, and to realize that the traditional strategy of claiming Social Security right when you retire is probably not optimal. At the end of this booklet, we provide you with a list of detailed Social Security calculators that can be helpful in finding the optimal strategy for your particular situation.

Part of the Problem: How Long Does the Money Have to Last?

There are plenty of uncertainties to deal with at all stages of life, and retirement is no different. At the top of the list is how long you (and your spouse, if you are married) will live, but there are other major risks lurking such as inflation, large, unexpected expenses (often related to health), and asset returns, just to mention a few major ones. Here we are going to cover the issue of how long you might live and therefore, how long your resources need to last. Our guess is that most people don’t know the basics of life expectancy such as how long, on average, someone of their age and gender will live. We can provide a little guidance on that. We can also provide some information about how long some of the luckier ones in your age cohort will live so you can know the facts and plan accordingly.

Let’s start out with the remaining life expectancy of men and women of retirement age using Social Security mortality statistics. Table 1 shows the remaining life expectancy for men and women. The data are taken from Social Security’s cohort life
tables. These tables are behind Social Security’s Life Expectancy Calculator, which can be found at [http://www.ssa.gov/oact/population/longevity.html](http://www.ssa.gov/oact/population/longevity.html). It is important to note that these statistics are the average number of years of remaining life. What we see in Table 1 is that 62-year old men can expect to live on average an additional 21.3 years, 65-year old men an additional 18.8 years, and 70-year old men an additional 15 years. All of this indicates that retirement age American men, on average, live to 83 to 85 years of age. Women live, on average, two years longer. To give you a sense of the amount of mortality progress that has occurred in the last fifty years or so, the remaining life expectancy of 65-year old American men in 1960 was 13.0 years (vs. 18.8 years in 2013) while it was 15.8 years (vs. 20.9 years) for 65-year old women. In other words, 65-year old men are expected to live, on average, 45 percent longer than they did in 1960 and 65-year-old women are expected to live more than 32 percent longer. These facts will be relevant when we note that some of the important terms of deferring the commencement of Social Security were first determined more than 56 years ago, in 1956.

Table 1. Average Remaining Lifetime in Years for Men and Women ages 62-70 in 2013

<table>
<thead>
<tr>
<th>Age</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>62</td>
<td>21.3</td>
<td>23.6</td>
</tr>
<tr>
<td>63</td>
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<td>17.3</td>
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<td>15.7</td>
<td>17.6</td>
</tr>
<tr>
<td>70</td>
<td>15.0</td>
<td>16.8</td>
</tr>
</tbody>
</table>

In making financial plans, you need more information than what is presented in Table 1. There is a great deal of uncertainty about how long you will live. First of all, the statistics of Table 1 are the average for all Americans, including those whose current
health is way below par. It includes smokers, those who have diabetes, those who are extremely obese, and those who are disabled. The remaining life expectancy of those who are in good health would certainly be longer than the figures suggest. Second, even if we knew your life expectancy precisely, there still would be lots of uncertainty about how long you would actually live. In all cohorts, some people are lucky and some unlucky in terms of how long they will live and next we turn to this issue.

Table 2 gives information about the degree of uncertainty about how long you might live. It reports the expected percentage of 65-year old men and women who will reach the milestone ages of 90, 95 and 100. The data are taken from the same Social Security cohort life tables. What we see in the table is that more than one-third of 65-year old women and more than one quarter of 65-year old men can expect to celebrate their 90th birthday. Even living to 100 is not out of the question. Social Security estimates that more than two percent of 65-year old men and almost five percent of 65-year old women will reach the century mark. These estimates are for people turning 65 on January 1st, 2013. There is every reason to think that those who reach 65 in the 2020s, 2030s or beyond will have even longer remaining life expectancies and even better chances to achieve these milestone birthdays.

Table 2. Chances of Living to Advanced Ages Conditional on Age 65

<table>
<thead>
<tr>
<th>Age</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>90</td>
<td>27.33%</td>
<td>36.02%</td>
</tr>
<tr>
<td>95</td>
<td>10.22%</td>
<td>16.24%</td>
</tr>
<tr>
<td>100</td>
<td>2.22%</td>
<td>4.73%</td>
</tr>
</tbody>
</table>

If you are married, the previous tables are informative, but you also need to know how long you and your spouse can expect to live together as a couple, and how long the survivor can expect to be a widow or widower. The answer depends on, among other
things, the age difference between you and your spouse. Table 3 shows the data for a married couple in which the husband is two years older than the wife. As one would expect, the average or expected years to the first death are less than the remaining life expectancy of the husband shown in Table 1. There is, after all, a chance that the wife will predecease her husband. The important implication of Table 3 is displayed in the last column, the expected length of time that the survivor outlives the deceased spouse. The figures indicate that from the perspective of the ages of retirement, the expected length of widowhood roughly ranges from ten to twelve years. Widowhood is a major stage of life. Clearly, married couples need to be concerned about the resources available to the survivor among them. Just like with the uncertainty about the length of a particular life, there is considerable uncertainty about the length of widowhood. Even though the average length of widowhood ranges from ten to twelve years, there is a considerable chance of the widow surviving their spouse by twenty or more years. People need to plan accordingly.

Table 3. Average length of time until first-to-die and second-to-die

<table>
<thead>
<tr>
<th>Husband’s Age</th>
<th>Wife’s Age</th>
<th>Years to 1\textsuperscript{st} Death</th>
<th>Years to 2\textsuperscript{nd} Death</th>
<th>Widowhood</th>
</tr>
</thead>
<tbody>
<tr>
<td>62</td>
<td>60</td>
<td>17.5</td>
<td>29.2</td>
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<tr>
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<td>61</td>
<td>16.7</td>
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<td>63</td>
<td>15.3</td>
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<td>68</td>
<td>11.8</td>
<td>21.6</td>
<td>9.8</td>
</tr>
</tbody>
</table>

Let’s take one more glance at Table 3. The numbers in the next-to-last column are the expected number of years to the second death. In other words, they are expected total length of retirement for the couple. You can see that people retiring between 62 and
need to be prepared for an average retirement length of between 25 and 30 years. The good news is that this is a long time… the bad news is that it takes a lot of money to live that long without any labor income. And, as always, we want to emphasize the uncertainty. A retirement lasting 35 to 40 years is quite possible.

So far, we have given you some information about how long people of your age and gender can expect to live on average (Table 1), we have noted that living past age 90 or even 100 is not out of the question (Table 2), and we have shown that one member of the average retired couple is likely to experience an extended period of widowhood (Table 3). All of this information is useful in determining an efficient plan for retirement financing.

**Annuities: Their advantages and disadvantages**

Life annuities pay you a particular amount per month for the rest of your life. Joint life annuities provide money for a couple and the survivor. Social Security benefits are paid in a particularly favorable form of life annuity in that the monthly payments are annually adjusted for inflation. But, in general, life annuities protect you from outliving your resources. Without them, you need to set aside some of your resources for unlikely events such as living to 100 or beyond. With an annuity, these unlikely events are the insurance company’s problem. The issuer of annuities can price their product based on average life expectancy, balancing their gain from those who live less than their life expectancy with their loss from those who outlive the averages. By removing the need to set aside resources to provide income for an extraordinarily long life, an annuity almost always provides a greater monthly payment than what one could achieve without
one. The main lesson here is that annuities greatly reduce or eliminate the risk of outliving your resources.

Private annuities, such as those you can purchase from insurance companies with your 401(k), 403(b) and 457 plan assets, have several features that may make them undesirable to some people. First, while some firms offer inflation-adjusted annuities, these are still relatively rare. If you purchase a typical annuity that provides $1,000 per month for life, the purchasing power of that $1,000 may be greatly reduced by the time you are 90. The negative impact of inflation would be dramatically larger if inflation averages 5.0 percent per year instead of 1.5 percent per year, for example. Of course, the future course of inflation is highly uncertain. Second, even in a competitive market, insurance companies price their annuity offerings based on the life expectancy of annuity purchasers, not based on the average life expectancy of someone of your age and gender. Why is there a difference? Well, because no one in really bad health would voluntarily buy an annuity. Annuity purchasers, by and large, do not have a history of cancer or heart attacks, for instance. They tend to be people with long life expectancies, not short ones. From the insurance company’s point of view, this is a case of adverse selection – the people who want to buy payments for life tend to live a long time. This means that if you are in average health, a privately purchased life annuity is less than actuarially fair, meaning that on average, you would expect to get more income by putting the premium in a bank account, letting it grow, and slowly drawing down the money over the remainder of your life.\(^1\) Annuities are less than actuarially fair for people in average health because they have been priced for people in above average health. Third, unlike

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\(^1\) Of course, buying an annuity can still be desirable if you are in average health, as it ensures that you will not run out of income even in the unlikely event that you live long past your life expectancy.
most financial assets, once you buy an annuity you cannot easily sell the contract and retrieve your money. People are understandably hesitant to devote what in some cases amounts to their life savings to such an irreversible financial contract. Fourth, annuities provide a rather inflexible pattern of income. A fixed monthly amount for life may be overly constraining if you had always planned for the vacation of a lifetime early in retirement. Many people also like to have a “rainy day fund” for unexpected expenses. For example, many retirees face unanticipated health-related expenses or need to help their children or grandchildren in an emergency. Finally, some people may not like the fact that if they die sooner than expected, the unspent money goes to the insurance company instead of the people they designate in their will, such as their children. It may not satisfy them that the insurance company’s gain from people with short lifetimes is what allows them to make monthly payments to those who outlive their life expectancy.

As you go through *Efficient Retirement Design*, we may give you another reason not to buy a life annuity from a private insurance company—namely that we will show you how to buy an annuity from Social Security on significantly better terms than offered by any insurance company.

We have listed a number of problems with privately purchased life annuities. Do keep in mind one overriding advantage, however. Other than the Social Security strategies that we are going to suggest, there is no other way to get as much monthly income from your private assets that at the same time protects you from running out of money in old age.

**Social Security: The Advantage is in the Details**
If you want to design an efficient retirement plan, you must understand the details of the Social Security benefit rules. This is where the money is to be found. The basics are simple. Social Security keeps track of your entire earnings history. All earnings before the age of 60 are updated or indexed to make them comparable. The way Social Security accomplishes this indexing is by multiplying your pre-60 earnings by the ratio of the average wage in the economy when you were 60 to the average wage when the earnings took place. To give you a concrete example, say you turned 62 in 2012 and therefore turned 60 in 2010. Your earnings in 1977 will be multiplied by the ratio of average wages in the country in 2010 ($41,673.83) to average wages in 1977 ($9,779.44). If you earned $7,000 in 1977, that figure would be multiplied by 4.2614 resulting in indexed earnings in 1977 of $29,830. This process is done for every year of your earnings before the age of 60 (wages at 60 and beyond are not indexed). The result is your indexed earnings history. Social Security then identifies your highest 35 years of indexed earnings, adds up these 35 numbers and divides by 420, the number of months in 35 years. The result of that process is your Average Indexed Monthly Earnings (or AIME). This is the first big step along the way to determining your Social Security benefits level.

The next thing that Social Security does is calculate your Primary Insurance Amount (PIA), which is the monthly benefit you could claim at your full retirement age (currently 66). This is a relatively straightforward formula based on your AIME. If you are turning 62 in 2013, PIA equals 90 percent of the first $791 of your AIME plus 32 percent of your AIME between $791 and $4,768 (i.e., the next $3,977) plus 15 percent of any of your AIME beyond $4,768. To give a specific example, an AIME of $3,500
translates to a PIA of $1,578. (PIA is rounded down to the next whole dollar amount.) If you turn 62 in a different year, the formula is slightly different – essentially, the dollar amounts used in the calculation are indexed for wage growth – but the general idea is the same. Your PIA is indexed for price inflation starting when you turn 62.

While we have provided these details for your information, the Social Security Administration actually does all of the record keeping and mathematics for you. You can go to the Social Security Retirement Estimator (http://www.ssa.gov/estimator/) and obtain an accurate estimate of your Primary Insurance Amount.

Your PIA is an important piece of information. It is the monthly benefit amount you would receive if you had never been married and started benefits at your full retirement age. If you start your benefits earlier, you get less than your PIA, and if you start them later, you get more. For example, those born between 1943 and 1954 receive 75 percent of their PIA at 62, 80 percent at 63, 100 percent at 66, 116 percent at 68 and 132 percent at 70. The credits for deferring Social Security benefits stop at 70. These adjustments to benefits are actually done on a monthly basis. For example, you get more for starting benefits at 64 and 3 months than you would if you started them at 64 and 2 months. If you are married – or if you are single but have ever been married for at least 10 years in the past – the situation is a bit more complicated. In these cases, you can claim spousal benefits on your spouse or ex-spouse’s earnings record. We will discuss the options available to married couples later. We should also note that the Social Security Administration refers to the credits for deferral as “delayed retirement credits.” However, we prefer to refer to them as credits for deferring benefit commencement to
emphasize that you don’t have to claim benefits right when you retire. You can defer benefits without delaying retirement.

The adjustments for different commencement ages are shown in Figure 1. The red upwards sloping line shows the percent of PIA that someone born between 1943 and 1954 would receive for all possible benefit commencement ages from 62 to 70. The blue jagged line is to be read off of the scale on the right and shows the percentage increase in monthly benefits from deferring Social Security by one additional year. The left hand most point on that graph, shows that delaying benefits from 62 to 63 would increase the monthly benefit by 6.67 percent plus inflation, the second point shows that delaying from 63 to 64 increases monthly benefits by 8.33 percent plus inflation, etc. While the graph is certainly jagged, a one year delay in benefit commencement always increases real monthly benefits by between 6.45 and 8.33 percent.
Sometimes a table can convey more information than a graph. For that reason, we supplement Figure 1 with Table 4, which shows the percentage increase in real monthly benefits for a wide range of deferral periods. The figures shown are the percentage increase in real monthly benefits relative to commencing them at the “deferred from” age. For example, the table shows that the real level of monthly benefits is 76 percent higher if they are started at 70 rather than at 62. It also shows that Social Security offers a 24.62 percent increase in real benefits for deferral from 64 to 67. The terms shown in Table 4 apply equally to those with high PIAs and those with low PIAs. They also apply equally to single men, single women, and the high and low earner in a couple, even though the expected length of time that these extra benefits will be paid varies across these categories.

Table 4: Percentage Increase in Real Monthly Benefits from Different Deferral Periods

<table>
<thead>
<tr>
<th>Defer to</th>
<th>70</th>
<th>69</th>
<th>68</th>
<th>67</th>
<th>66</th>
<th>65</th>
<th>64</th>
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</thead>
<tbody>
<tr>
<td>70</td>
<td>76.00</td>
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The adjustments shown in Figure 1 and Table 4 have routinely been judged to be “actuarially fair.” Let us explain what this means. In order for the adjustment to be actuarially fair, a person’s stream of benefits from Social Security would have to be equally valuable regardless of commencement date. That is, if you claim benefits later,
the higher monthly benefits would just compensate for the shorter remaining lifetime over which you will collect benefits. It should also just compensate you for the interest you could have earned by collecting benefits early and putting these benefits in a savings account. To put it in technical terms, the adjustments are actuarially fair if Social Security benefits have the same expected present value regardless of when they are commenced. Obviously, actuarial fairness depends on life expectancy and interest rates. This is why we believe that the conventional wisdom – that Social Security benefit adjustments are actuarially fair – no longer holds. The commencement age adjustments may have been actuarially fair for single people at some time in the past, but today’s longer life expectancies and extremely low interest rates make deferral actuarially advantageous.

One reason why deferral is advantageous today is that the pattern of adjustments shown in Figure 1 and Table 4 was partly determined by legislation that was enacted many decades ago. The reduction in benefits for early retirement was established in 1956 for women and 1961 for men. Ever since then benefits have been reduced by 5/9 of one percent per month for the first 36 months of early retirement. Life expectancies were significantly shorter fifty-six years ago and the actuarial adjustments were roughly fair for single people at the time (deferring was somewhat advantageous for the average woman and somewhat disadvantageous for the average man). Further, Social Security benefits were not yet indexed for inflation, so deferring commencement led to larger monthly benefits, but the incremental benefits were not necessarily protected from the ravages of inflation. The credits for delaying commencement beyond the full retirement age vary by birth year cohort, and they have actually gotten more generous over time.
Figure 1 and Table 4 presents the “deal” for those born between 1943 and 1954, which is more favorable than the “deal” received by those born earlier. This schedule was put in place thirty years ago as part of the 1983 Social Security amendments. To see this more clearly, you might ask yourself whether a private insurance company would have made its annuity terms less generous in the face of major longevity improvements. The answer is “of course, yes.” But the Social Security deal has, if anything, gotten more generous.

The payoffs for deferring Social Security benefits are adequately summarized in Table 4. The costs for deferring are the foregone benefits – that is, the benefits that you don’t receive while deferring. In order to confirm our assertion that deferral is now a good deal, we used the website http://incomesolutions.com/AnnuityCalculator.aspx in November 2012 to obtain estimates of the commercial terms on annuities. We checked how large an annuity you could buy with the money that you otherwise would have received from Social Security. For instance, instead of deferring Social Security benefits from 62 to 70 and getting the 76 percent bump in Social Security benefits shown in Table 4 for this case, suppose you started collecting Social Security benefits at age 62 and put all of the checks into a savings account earning one percent annual interest. Then, at age 70, suppose you used the accumulated balance in the savings account to buy a life annuity from a private insurance company. How would the monthly payouts from this insurance company annuity compare with the deal offered by Social Security? We will have the answers momentarily. But, before we give them to you, one caveat is in order. As of today, only a few private insurance companies offer inflation-indexed life annuities. So, we are going to be stuck comparing nominal annuities with Social Security’s superior inflation-indexed annuities. Table 5 shows the monthly benefit from
using the Social Security benefits paid between the “defer from” and “defer to” ages to buy a private annuity. The monthly benefit is expressed as a percentage of the Social Security benefit paid starting at the “defer from” age, and we’ve provided figures for single men, single women and married people wanting a joint survivor annuity with 100 percent survivor benefits. These numbers can be directly compared with those in Table 4, with the caveat that the numbers in Table 5 are not inflation indexed and thus will gradually decline as a percentage of the indexed Social Security benefit. We should also point out that the numbers in Table 5 depend on whether you are male, female, or a couple purchasing a second-to-die annuity. In Table 4, they did not. That’s because private annuity companies would never offer the same terms to single men, single women and married people who either want a first-to-die or a second-to-die annuity. They would be crazy to do so. But that is exactly what Social Security does.

What you see in Table 5 is that the numbers are generally smaller than their Table 4 counterparts, meaning that the monthly payment of the privately purchased non-indexed life annuity would be smaller than even the first payment of the incremental annuity acquired at the same cost through Social Security deferral. Often the numbers are much smaller. For instance, consider a single woman who commences benefits at 62 and saves her Social Security income to buy a private annuity at age 70. This woman would see her monthly income increase by 52.35 percent at age 70. If instead she defers the commencement of Social Security from 62 to 70, her benefits would be 76 percent higher. That is quite a large difference. There are only four exceptions for men and one exception for women (highlighted in bold red). The exceptions involve relatively short deferrals starting at 67 or older. Even these exceptions do not prove that the Social
Security incremental annuity is inferior in those cases. The incremental Social Security benefit obtained via deferral is inflation adjusted, meaning that it will eventually have a greater payout than the insurance company life annuity, even in the five out of 108 cases where it starts behind. We’ve done calculations to confirm that, by age 80, the Social Security incremental annuity would be paying out more than the insurance company purchased annuity for every possible deferral in Tables 4 and 5. These results and conclusions apply regardless of a person’s earnings record or Primary Insurance Amount.
Table 5: Private Life Annuity Monthly Payout Relative to Social Security Benefit

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Defer From

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C. Joint with 100% Survivor Benefit

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We want to emphasize again that the absolute advantage of the Social Security annuity is quite large in many cases. For example, a woman with a PIA of $1,925 who deferring from 62 to 70 would have a $400 per month advantage at 70 compared to buying a private annuity, and that advantage would grow to more than $680 per month by age 80 if the Federal Reserve succeeds in meeting its inflation rate target of two percent per year. Based on this analysis, we can conclude that deferral is almost always actuarially advantageous with today’s life expectancies, and the terms of deferral are also almost always better than those offered in private insurance markets.

There are at least five reasons why incremental Social Security annuities offered through commencement deferral are better deals than private insurance companies can offer. First, there is the fact that the terms for delaying Social Security have actually gotten more generous despite longer life expectancies. All insurance companies have lowered their monthly payouts due to improved mortality. Second, Social Security has not changed its deal due to today’s extremely low nominal and real interest rates. The commercial insurers have lowered their payout amounts significantly because of this factor. Third, Social Security almost certainly experiences less adverse selection than any private annuity seller. Almost everyone is covered by Social Security although certainly everyone does not defer benefits. Fourth, Social Security has much lower administrative and advertising costs, and it does not have to earn a profit. And, lastly, Social Security offers particularly attractive terms to women and married people because it does not price in either the expected survivor benefits or the more favorable mortality experience of women relative to men. Our conclusion so far is that Social Security is the
place to “buy” an extra annuity – an annuity that can be purchased by delaying commencement.

There are several other features of Social Security that are worth knowing about. First, if you are married, you and your spouse can each collect an individual benefit based on your separate earnings records (most common for two-earner couples). However, you are also entitled to collect a spousal benefit based on your spouse’s earnings record. If you claim the spousal benefit at your full retirement age, you will get half of the PIA of your spouse. If you claim both a spousal benefit and a benefit based on your own earnings record, you will receive the higher of the two benefits. Effectively, a married couple claiming benefits at full retirement age is entitled to either the two individual PIAs or 150 percent of the larger PIA, whichever is higher. There is a penalty for claiming spousal benefits early, but no credit for deferring these beyond full retirement age.

Spousal benefits also embody another very important feature of Social Security. Pay attention, because here is where some of the money is to be found in adopting an efficient retirement strategy. If you have reached full retirement age, you are allowed to claim your spousal benefits only, leaving any benefits based on your own record to accumulate credits for deferral until you are age 70. This presents you with an amazing opportunity – getting paid by Social Security (in the form of spousal benefits) while you delay commencement on your own record and earn the generous deferral credits. A spouse cannot commence benefits before the worker has filed a claim for Social Security, but we will describe an official way around this restriction called “file and suspend.” We will describe this strategy in some detail when we describe efficient retirement design for one-earner couples. The spousal benefit applies to many divorced people too: if you
are single but were married in the past for more than 10 years, you are entitled to claim a spousal benefit on your ex-spouse’s earnings record while you defer claiming on your own earnings record.

Another important matter is benefits for widows and widowers. If you are widowed, you can continue to receive your own benefit (based on your earnings record), or you can receive a survivor benefit if it is higher. The survivor benefit is equal to the larger of the deceased spouse’s own benefit and 82.5 percent of the deceased spouse’s PIA. Thus, the survivor of a couple receives approximately the larger of the two benefits that the couple was receiving before the death in the family. This is very important for the deferral strategies that we are going to describe. It means that increasing the larger benefit through commencement deferral produces incremental benefits that will last not only for the lifetime of the worker, but for the life of the survivor as well. Increasing the lower benefit through deferral may be advantageous as well, but it is less so than for the higher earner, because the added monthly income only lasts until the first to die. Table 3 shows the expected duration of the increased benefits in both circumstances and there is a very big difference. Survivor benefits can also be relevant for single people who were widowed before retirement. These singles can claim a survivor benefit on their deceased spouse’s record and while deferring claiming on their own record.

Let’s Get Real About Interest Rates

So far, we have covered some important matters related to designing an efficient retirement strategy. Deferring the commencement of Social Security involves giving up a monthly income now for a larger monthly income later. How much larger? Well, the
answers are in Table 4. How long will you collect these higher benefits? Again, some of the answers were in Tables 1, 2, and 3. But, anytime you have a choice between getting money now or more money later, the interest rate is an important factor. Bond buyers face this choice every day. That is, they give up money to buy a bond today in return for more money later. The interest rate tells you what the market-determined tradeoff between money now and money later is at the moment. If you were faced with a particular deal – say, giving up $1,000 today in return for $1,400 in ten years – you would need an interest rate to evaluate it. This example would be a good deal at interest rates of three percent or less and a bad deal at interest rates of four percent or more.

So, the question is what interest rate should we use to evaluate the Social Security commencement deferral deals? The fact that Social Security benefits are inflation-indexed is important. It means that the correct interest rate to apply is a “real interest rate” or an inflation-adjusted interest rate. Roughly speaking, the real interest rate is the nominal interest rate minus the expected rate of inflation. The fact that the Social Security deferral deal is being offered by the U.S. government is also important. Even today, U.S. government obligations are generally viewed as very safe. We think that you can treat the promised return for deferring the commencement of Social Security as equally safe. In fact, we have never heard of any serious Social Security reform proposal that changed benefits for people 55 or over. So, we believe that the correct interest rate to use is an inflation-adjusted one based on a high credit rating. The obvious candidate – just about the only candidate – is the rate on Treasury Inflation Protected Securities (TIPS). These are U.S. government bonds that protect the holder from inflation with annual inflation adjustments.
What are the real interest rates on TIPS these days? Here, we refer you to http://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?data=realyield. The quotes for November 1, 2012 are given in Table 6. What may surprise you is that the one-, five-, ten- and twenty-year real interest rates are all negative, and the twenty year rate is approximately zero. Interest rates, both nominal and real, have been falling for quite a few years, but these negative real rates are relatively new. The 10 and 20 year rates are probably the ones to focus on in our Social Security present value calculations. Even though Social Security annuities can last thirty years, the average duration or time before the money is received is closer to 10 or 20 years.

Table 6: Yields on Treasury Inflation Protected Securities (TIPS), November 1, 2012

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One question you may have at this point is whether these current low rates will persist, or whether they are an unusual episode. To gain some perspective on this issue, Figure 2 shows where the ten-year TIPS real yield has been since January 2003. It shows that the real interest rate on ten-year TIPS averaged about two percent for the years 2003-2008 and have been falling unevenly ever since. The real interest rate on 10-year TIPS has been consistently negative since January 2012 and ended the year at about negative 0.75 percent. While we didn’t graph the data, the 20-year TIPS rate has been approximately zero since June 2012. This suggests that investors are willing to lock in a zero-percent real interest rate for 20 years, meaning that they do not expect interest rates
to rise much, on average, over this period. Given these market interest rates, we think assuming a zero real interest rate is not only reasonable, it could even be considered too high. Nonetheless, we will use a zero real discount rate as our base-case assumption.

Okay, you have most of the basics. You know quite a bit about life expectancies, you know the general way Social Security determines benefit amounts, and you know about the recent incredibly low interest rates. It is time to put this all together. We turn now to a set of case studies. These cases were not chosen because they are unusual, but quite the opposite. We hope that they are common enough that many people can learn something from them.
Case Study 1 – A Two-Earner Couple

This first case study involves a married couple. Both spouses turn 62 in 2013 and they’ve decided to retire on their 62nd birthdays. They both have had extensive work careers. They check with Social Security, which informs them that the husband, Tony, has a Primary Insurance Amount of $1,984 and the wife, Claire, has a Primary Insurance Amount of $1,603. The couple’s other retirement resource is their combined 401(k) accounts of $257,000. If they follow in the footsteps of most Americans, they would each start their Social Security on their 62nd birthday (i.e. upon retirement) and collect 75 percent of the sum of their PIAs, or $2,690 per month. They receive 75 percent instead of 100 percent because they are starting their benefits four years before their full retirement age of 66. If they wanted to get the most out of their 401(k) accounts while still assuring that the money would last both of their lifetimes, they could buy a life annuity from a private insurance company. The annuity that we priced out at http://IncomeSolutions.com/AnnuityCalculator.aspx was one with a 50 percent survivor’s benefit. According to this calculator, they’d get a starting benefit of $1,217 per month if they used all of their 401(k) assets. Therefore, the couple’s combined monthly retirement income the first year would be $3,907 per month. Social Security benefits are indexed for inflation (assumed as two percent) and the life annuity payouts are not. The nominal income for the couple as long as they both survive is shown in Figure 3. The widow or widower will eventually get $608.50 per month from the private annuity and 82.5 percent of Tony’s PIA adjusted for inflation. We refer to this strategy as the 62/62

2 For our couple examples, we assume that the annuity purchaser is the husband. Thus, the full annuity is paid over the lifetime of the husband, and the wife receives the 50 percent survivor benefit.
strategy, or the parallel strategy, as Tony and Claire claim Social Security at age 62 and use their 401(k) assets in parallel with Social Security.

The purpose of this booklet is to explore whether people such as Tony and Claire can do better than the situation depicted in Figures 3. We hope by now that you think that they should at least explore the possibility of using their 401(k) assets to defer the commencement of Social Security. You might also have gathered that deferring is going to be more beneficial for Tony than for Claire, because the benefits for the survivor will be based on his benefit level. Remember, the survivor always collects the higher of the two Social Security amounts, even if that benefit is not based on their own record. The first priority of the couple should be to defer Tony’s Social Security commencement as long as possible, to age 70. Fortunately, Tony and Claire have enough in their 401(k) to
do just that. They also can take advantage of the spousal benefit. A good strategy for Tony and Claire would be for Claire to commence her Social Security benefits at age 66.\(^3\) Tony should then commence spousal benefits based on Claire’s earnings record, also at age 66. So, beginning at 66, the couple will receive 150 percent of Claire’s PIA, adjusted for inflation from the time that they were 62. Claire qualifies for 100 percent of her PIA since she is at her full retirement age, and Tony qualifies for a spousal benefit of 50 percent of Claire’s PIA. If there was two percent inflation in the four preceding years, then starting at 66, their Social Security checks would total $2603 per month. At age 70, Tony can switch from claiming spousal benefits to claiming benefits based on his own record. At that age, he qualifies for 132 percent of his PIA. We call this particular deferral strategy the 66/70 strategy, indicating that the secondary earner starts Social Security as 66, the primary earner starts spousal benefits at 66 and the primary earner collects their own benefits at 70. Under this strategy, Tony and Claire use their 401(k) assets and Social Security in series, rather than in parallel.

\(^3\) Our recent academic research on this topic suggests that at a zero percent real interest rate, the couple may maximize the net present value of benefits if they both defer to age 70, with Claire claiming spousal benefits at age 66. (See Shoven, John B., and Sita N. Slavov. 2012. “Does it Pay to Delay Social Security?” https://dl.dropbox.com/u/8663779/Shoven_Slavov_APPAM.pdf.) However, the strategy we describe here is close, and it provides them with more income from ages 66 through 70, which makes it feasible with a smaller amount of 401(k) assets.
The couple’s income under the 66/70 strategy is shown in Figure 4. The yellow bars in Figure 4 represent money withdrawn from their 401(k) accounts. If they can earn one percent nominal interest, then their $257,000 is just enough to match their Social Security income if they had commenced benefits at 62. Their standard of living from 62 through 69 is exactly the same as if they had followed the parallel strategy, buying a private annuity and starting Social Security right away.

Just eyeballing Figures 3 and 4, you can see that Tony and Claire are quite a bit better off using their 401(k) balances to defer Social Security than they are with the parallel strategy. But, we don’t have to rely on eyeballing. Figure 5 shows the difference in total income for Tony and Claire as a function of their age while they both survive as a couple. Remember, we’ve constructed this example so that the couple has exactly the
same income between ages 62 and 69. But, income jumps to $577 per month higher at age 70 and rises to more than $1,000 per month higher at 81 and approximately $1,400 per month higher by age 89 with the 66/70 strategy of Social Security deferral. To put these figures in comparative terms, the couple’s total income is 13.23 percent higher at age 70, 19.19 percent higher at age 80, and 24.58 percent higher at age 90. Remember that the 66/70 strategy uses up the 401(k) balance and the couple’s Social Security entitlement just like the parallel strategy with the purchased annuity did. It is just that the 66/70 strategy results in a much higher income level for the couple at 70 and beyond.

![Figure 5: Difference in Couple's Income](image)

We haven’t even gotten to the biggest payoff of the deferral strategy for a two-earner couple such as Tony and Claire. Recall that the widow’s benefit is based on the larger of the two monthly benefits. If Claire survives Tony, she will collect 132 percent of Tony’s PIA under the 66/70 strategy. In contrast, she will get 82.5 percent of Tony’s
PIA plus $608.50 from the insurance life annuity under the 62/62 plan. There is an enormous difference. Figure 6 shows how much more the survivor receives with the 66/70 series strategy compared to the parallel strategy.

The dark blue bars in Figure 6 show the survivor’s total income under the parallel strategy. That is, the dark blue bars are the sum of what the widow or widower would get from Social Security and the insurance company annuity as a function of age. The yellow bars on top of the blue bars represent the extra income if the couple adopts the 66/70 deferred commencement (series) strategy rather than the parallel approach. The differences are very significant. If the first spouse dies at age 70, the widow begins with an extra $542 per month under the 66/70 strategy, and the advantage continues to grow as she gets older. The survivor picks up the chart in Figure 6 whenever the first spouse
dies. In the unlikely and unfortunate event that one of the spouses dies before age 70, the survivor is still better off under the 66/70 strategy compared to the parallel strategy. The reason is that in the parallel strategy all of the private assets were annuitized at age 62, whereas with the 66/70 strategy, the assets were gradually spent down between ages 62 and 70. Thus, if one spouse dies during the deferral period, some of the private assets will remain in the 66/70 approach, but none will remain in the parallel one.

The advantage of the 66/70 deferral strategy is best conveyed in relative terms. In the event that Claire becomes widowed at age 70, she would have more than 21 percent more income. At 80, she would have roughly 27 percent more income and at 90, roughly 32 percent more. These are really dramatic differences. Let’s concentrate on the widow in her 80s, the most likely age of widowhood. Under the 66/70 deferral strategy rather than the traditional parallel approach, the widow has between 27 and 32 percent more money to live on. This dramatic improvement in the standard of living of the widow can be achieved without taking significant risk.

So, let’s sum this up. With exactly the same amount of money (401(k) assets of $257,000) and the same Social Security earnings records, the 66/70 series strategy yields the same income for the eight years between 62 and 69 and significantly higher income for every subsequent year and for the eventual widow or widower. It completely dominates the parallel strategy. When the couple or the widow is in their 80s, the extra income is of the order of $1,000 per month.

**Paying for the 66/70 strategy**
Tony and Claire were fortunate to have $257,000 to use for replacing Social Security income for the eight years between ages 62 and 70. Realistically, a couple is unlikely to be willing to devote every last dollar to Social Security replacement, so they would need more than the $257,000. For example, if they had $400,000 in financial assets, they could use $257,000 to defer Social Security and still have a rainy day fund of $143,000. The advantages of the 66/70 strategy are pretty amazing, but what can a couple do if they don’t have – or aren’t willing to spend – the required amount of money?

One look back at Figure 4 might give you one idea. The yellow bars in that figure represent the foregone Social Security that needs replacing. If the couple could work for four more years and retire at 66 instead of 62, financing the 66/70 strategy would be a lot cheaper. Implementing the 66/70 strategy would cost only about $70,000 if the couple worked until 66. This lower cost/work longer option would have all of the same benefits for the couple after age 70, and all of the benefits for the survivor as well.

Alternatively, the couple could defer Social Security for a shorter period. To see this, suppose Tony and Claire instead had only $64,585 in 401(k) assets, rather than $257,000. Let’s also assume that they are determined to stop working at age 62. If they aren’t inclined to work longer, how can they use their 401(k) assets to maximum advantage? Clearly they cannot implement the 66/70 strategy – it is simply too costly. The traditional approach would be for both spouses to claim their Social Security benefits at retirement at age 62, collecting $2,690 per month from Social Security. If they used their 401(k) accounts to buy a life annuity with 50 percent benefits for the survivor, the monthly payout would be $304. Thus, their total monthly income would start at $2,994
and go up over time due to the fact that Social Security is inflation indexed. This is the 62/62 parallel strategy.

But here’s an alternative, affordable series strategy. Let’s have Claire begin Social Security at age 62, while Tony waits for three years and commences benefits at 65. How would this 62/65 series strategy work out for them? The 62/65 strategy can match the 62/62 strategy in terms of income for the first three years – that is, when they are 62, 63 and 64. Then, at age 65 the payoff from the three years of deferral begins. Tony and Claire would enjoy an extra $82 per month at 65, rising each year and reaching $122 per month at 70, $216 per month at 80, and $329 per month at 90. The survivor also would be better off because his or her benefits would be based on Tony claiming at 65 rather than at 62. The survivor benefits would be $100 per month higher at 70, $155 per month higher at 80 and $222 per month higher at 90. Obviously you can do less with $64,000 than with $257,000, but qualitatively the results are the same – income is matched during the deferral period and higher after that for the couple and for the survivor. In this case, the 62/65 plan dominates the 62/62 parallel strategy.

**How Representative Is This Two-Earner Couple?**

You might be wondering whether Tony and Claire are really representative of two-earner couples. But it turns out that there are many general lessons that can be learned from this example. That’s because the absolute levels of Tony and Claire’s earnings are not really important. A couple that earned more or less than Tony and Claire would have the same relative advantages of deferring Social Security. Here are some general lessons for two-earner couples:
1. Defer the commencement of the person with the higher PIA (earnings record) as much as possible. The limit is 70.

2. After the high earner has exhausted deferral opportunities, the lower-earner can defer. This is much less important in terms of creating extra resources for the couple, but deferring benefits for the lower-earner until age 66 or even 70 often makes sense.

3. Typically, one member of the couple should claim spousal benefits at age 66 while deferring his or her own benefit beyond age 66. This provides more income for the household during the deferral period.

4. The deferral can be financed with private assets or through working longer. Some couples may even be able to finance the delay through transfers from children. The return to deferral is so compelling that all possibilities of financing it should be considered.

One-Earner Couples

Next we will look at a family structure that is less common than it used to be, the one-earner couple. By one-earner couple, we don’t literally mean a couple where one member has a covered work history with Social Security and the other does not, although there may be some of these. We simply mean a couple where the Primary Insurance Amount of the lower earner is substantially less than the PIA of the primary earner – so much less that it would not be worth it for the primary earner to claim a spousal benefit while delaying his or her own benefit. At full retirement age, the lower earner is eligible for spousal benefits of 50 percent of the primary earner’s PIA. Therefore, the lower earner will receive the spousal benefit.

Here is an example of this situation. Consider a married couple, Gary and Linda, ages 62 and 60 respectively. Gary’s PIA is $1,984 (the same as Tony’s in the previous example), but Linda’s is only $712 due to her limited fourteen years of earnings covered by Social Security. Since Linda’s PIA is substantially less than half of Gary’s, she is
better off collecting spousal benefits than benefits based on her fourteen-year covered
career. As an aside, this means that all of the Social Security (FICA) taxes that Linda paid
will not increase Gary and Linda’s retirement resources at all. The couple would have
faced exactly the same choices if she had never worked in the job market at all.

Gary and Linda have both stopped working and are fortunate to have $319,000 in
private assets to devote to their retirement. If they follow the traditional approach, Gary
would start Social Security immediately, while Linda would wait until she is 62 to start
her spousal benefits. They could use their substantial private assets to fill in for the two-
year wait until Linda is eligible for spousal benefits at 62. At that point, they could buy
an annuity with the remaining money. Gary would get 75 percent of his PIA starting
immediately and Linda would get 35 percent of Gary’s PIA starting in two years when
she turns 62. The income pattern for this couple under the traditional approach is shown
in Figure 7. We still call this a 62/62 parallel strategy because both spouses commence
their Social Security benefits at age 62, and they use most of their 401(k) assets in
parallel with Social Security. The couple devotes roughly $18,000 to cover the two-year
wait for Linda’s spousal benefits. This leaves $301,000 to buy a joint life annuity with a
50 percent survivor benefit.
Once again, there is an alternative 66/70 strategy, although it has to be implemented differently in the case of one-earner couples. The difference is due to the fact that only one member of a couple can claim spousal benefits. So, Gary will not be collecting spousal benefits, unlike Tony in the two-earner example. Here’s what Gary and Linda should do: at age 68 (when Linda turns 66), Gary does a “File and Suspend” with Social Security. What this means is that he files for his Social Security benefits, but then tells the Social Security Administration to suspend his benefits. Because Tony has filed, Linda is eligible to collect spousal benefits. But, because his benefits are suspended, Tony can continue earning deferral credits. This File and Suspend opportunity became available in 2000, and it is available to individuals who have reached full retirement age. Once Tony has filed and suspended his benefits, Linda then
files for spousal benefits at age 66. These benefits amount to 50 percent of Gary’s PIA adjusted for the six years of inflation since Gary was 62. Linda should definitely not wait beyond 66 to do this, because spousal benefits are not increased for delayed commencement beyond the full retirement age. Gary then contacts Social Security and starts his benefits for real when he turns 70, at which time he gets 132 percent of his PIA. They use their private assets to match their spendable resources for the first eight years. After that, they live on their Social Security checks, which will equal 182 percent (132 percent for Gary and 50 percent for Linda’s spousal benefit) of Gary’s PIA adjusted for inflation. Their income pattern under this strategy is illustrated in Figure 8. Note that in Figure 7, Gary and Linda were collecting Social Security as soon as possible, whereas in Figure 8, Gary is postponing Social Security as long as possible and Linda is commencing spousal benefits at 66 rather than at 62. You can also see that the total income of the couple bumps up at age 70 with the deferral strategy.
Figure 8: The 66/70 Strategy for Gary and Linda

Figure 9 plots the difference between the couple’s total retirement income in the 66/70 strategy and the 62/62 strategy. Notice that, by construction, the couple has exactly the same income for the first eight years (while Gary is 62-69). After that, the 66/70 deferral strategy results in more income (and more inflation protection). The extra income starts out at $281 per month at age 70 and climbs steadily to almost $1,100 per month at age 90. This climb is simply due to the fact that with the deferral strategy, all of the couple’s income is indexed for inflation, whereas only a fraction of it is in the traditional approach.
Just like in the two-earner case, the biggest impact of deferring the commencement of Social Security is felt by the widow or widower. In fact, the survivor of Linda and Gary will enjoy exactly the same income as the survivor of Tony and Claire. In both cases the survivor’s benefit will be 132 percent of the higher earner’s PIA adjusted for inflation, and we have assumed that Tony and Gary have the same PIA. This illustrates an interesting feature of Social Security. In terms of survivor benefits, the secondary earner’s work record makes no difference. Figure 10 shows the increase in survivor benefits from choosing the 66/70 deferral strategy rather than the 62/62 parallel strategy.
Gary and Linda’s situation is pretty typical for one-earner couples. Here are some general principles for such couples:

1. The earner in a one-earner couple should delay commencement as much as possible, preferably to 70, unless both spouses are in much worse than average health.

2. If the non-earner can afford to wait until age 66 to collect spousal benefits, there is an advantage in it. However, this is a lower priority than rule #1. Under no circumstance should the non-earner delay commencement beyond age 66.

3. The non-earner can start benefits even if the earner continues to work, as long as the earner has reached full retirement age. To make this happen, the earner should do a “File and Suspend” with Social Security. Note that the primary earner can only do this after reaching full retirement age.

**Strategies for Single People**
Finally, we turn to Social Security claiming strategies for single people. The calculation is very simple for a single person who has never been married. But if the single person was previously married, it gets more complicated, as many singles who are widowed or divorced can claim Social Security benefits not only based on their own earnings record, but also on the earnings record of their ex-spouse. So, we need to classify retiring singles into two groups - those who are eligible to claim on someone else’s earnings record and those who are not eligible to do so.

Let’s first consider the simple case of a never-married single person. There actually isn’t much to say in this case beyond what was implicit in Table 1 (showing male and female life expectancy) and Table 4 (showing the return to deferral). Deferring Social Security commencement is in the interest of single men and women in average health. The benefits are greater for women simply because women have more favorable mortality risks than men. If they have sufficient resources or if they are willing to work longer, single women can maximize the value of their Social Security by delaying commencement to age 70. Men in average health should also defer, although the value maximizing strategy is to claim at 69.

Now, let’s get to a slightly more complicated case. Consider Ellen, a 62-year old widow who has a long earnings record of her own. She stopped working right before she turned 62, and her PIA is $1,500 per month. Her husband, Frank, died when both he and Ellen were 52. He had thirty-years of covered earnings at the time and his PIA is $1,450 per month. While Ellen could and probably should defer collecting on her own record until she is 70, at which time she will qualify for 132 percent of her PIA adjusted for inflation, she doesn’t have to finance the deferral out of her private assets. Instead, she
can collect survivor benefits immediately based on Frank’s earnings (in fact, she could have started them as early as age 60, but she was working then and would have faced an earnings test that would have eliminated the incentive to do so). At her current age, 62, Ellen can begin collecting survivor benefits amounting to 81 percent of Frank’s PIA, or $1,174.50 per month. If she collected on her own record instead, she would receive only $1,125 per month (75 percent of her PIA). That makes deferral a fantastic financial deal for Ellen. She can immediately start collecting the $1,174.50 per month – more than she would get if she claimed on her own record right away – and later switch to her own-record benefits after they have accumulated deferral credits. If Ellen switches to her own benefit at 70, she will get $1,980 per month plus inflation adjustments. Notice that, unlike in the previous examples, Ellen requires no private assets to implement a deferral strategy. She can get paid by Social Security (with her survivor benefits) while deferring her own benefits. We believe that many people in Ellen’s situation are simply are leaving money unclaimed by commencing their own benefits as soon as they can.

What if Ellen wanted to work longer? In that case, she may not be able to collect survivor benefits until she turns 66. But, at that point, she would be able to get 100 percent of Frank’s PIA, while continuing to work and accruing deferral credits on her own record. More generally, most survivors can gain from commencing either their survivor or worker benefit first and letting the other benefit grow through deferral. The right order depends on how big the deceased spouse’s PIA is relative to the individual’s own PIA.\(^4\)

Now, let’s look at someone who got divorced after a marriage that lasted at least 10 years, and has never remarried. In particular, consider the case of Danielle. She is 62 now, but had been married to David for 14 years previously. Their marriage ended in divorce when Danielle was 38 and she never remarried. Danielle is eligible for spousal benefits based on David’s entire earnings record (not just his earnings record while they were married). It does not matter whether David remarried or not. It is completely possible for David’s current wife and his ex-wife, Danielle, to simultaneously collect spousal benefits based on David’s record. If Danielle retires at 62, she can immediately collect spousal benefits amounting to 35 percent of David’s PIA. If David’s PIA is $1,800 then Danielle’s monthly Social Security check will be $630. This may not seem like much, but it beats nothing. Remember Danielle can receive this amount, plus inflation adjustments, while she defers collecting on her own work record. For instance, if Danielle claims her $630 per month spousal benefits at age 62 but defers collecting her own benefits until age 70, she will collect more than $60,000 from Social Security while increasing her own-record benefits by the 76 percent shown in Table 4 for deferring from 62 to 70. This example is meant to illustrate that divorced singles – like widowed singles – can often benefit by starting their spousal benefit first and then switching to their worker benefit.

Additional Complexities

Thus far, we have looked at several simple examples involving couples or singles with average life expectancy. What if your life expectancy differs from average? For example, what if you are a smoker? Or what if you have a health condition like diabetes?
Our research suggests that at today’s interest rates, some degree of deferral makes sense even for people with mortality rates that are twice as high as average. For example, a single male with mortality that’s twice as high as average maximizes the expected net present value of his Social Security benefits by claiming at 65. A similarly situated female maximizes value by claiming at 68. For couples, a primary earner in poor health can still benefit from delaying to age 70. Even if the primary earner doesn’t expect to live for long, delay increases benefits for the widow.\(^5\)

To keep our examples simple, we have also ignored some of the complexities of Social Security’s rules. For example, it is possible for one member of a couple to start his or her benefit at, say, age 62, suspend it at 66, and start it again at 70, earning deferral credits. This tactic might be part of an optimal strategy for a couple. In addition, you may face larger increases in Medicare Part B premiums if you delay Social Security.\(^6\)

**Resources for Further Assistance**

We hope we’ve convinced you that delaying Social Security is a terrific deal for many people. Obviously, we can’t cover every possible situation or all the complexities of Social Security in this booklet. Our goal has been to convey some general principles and inspire you to investigate further. To that end, here are a few websites that offer detailed calculations of the optimal time to claim Social Security, based on your individual circumstances. We don’t necessarily endorse any of these, and we can’t vouch

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for their accuracy. But they could be helpful to you as you start thinking about designing an efficient retirement.

- Social Security Solutions: http://www.socialsecuritysolutions.com/
- Social Security Choices: http://www.socialsecuritychoices.com/
- SS Income Planner: https://www.ssincomeplanner.com/servlet/init
- Maximize My Social Security: http://maximizemysocialsecurity.com/