Spousal and Survivor Elections of Normal Versus Early Retirement Benefits
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This paper will discuss the issues facing a spouse, who is trying to decide whether or not to receive Social Security retirement benefits early. It will also discuss this same issue for a survivor, who will be receiving Social Security benefits based on a deceased spouse's earning record.

In an earlier paper to this audience, we discussed the financial implications for a worker if he elects early retirement Social Security benefits at a reduced level instead of full Social Security benefits at the normal retirement age. The conclusion was that there could be some small financial advantage to postponing the receipt of Social Security benefits for persons in good health under the assumptions used. This is because the value of the additional income received after normal retirement would exceed the value of the income given up during the early retirement period. However, the differences were not great. In most cases, a retiring worker can make a decision about when to begin Social Security benefits that is unrelated to the potential for a slight financial advantage for one option versus another. However, for persons in poor health or who have dependent children, an early election is probably preferable for the reasons stated in the paper. And for persons in a high marginal income tax bracket, consideration can be given to postponing the election to receive Social Security benefits, but not past age 70.

Spousal Retirement Benefits

Similarly, the spouse of a worker who is receiving spousal benefits based on a worker's earning record must decide whether to receive full spousal benefits at the normal retirement age

or reduced retirement benefits at an earlier age, but no sooner than age 62.[1,2] This paper will try

to identify the issues surrounding a spousal early retirement decision to help people understand

its financial implications.   We will use the same set of assumptions as in the earlier paper to

analyze the issues and financial implications (9% interest earnings, the A2000 MGM set back 2

years mortality table, 3% CPI increases, and a 20% marginal income tax bracket).

If a spouse is younger than the Social Security normal retirement age for full spousal

benefits (currently age 65), she can wait until her normal retirement age (NRA) and then start to

receive full spousal benefits, which will be equal to 50% of the worker's benefits.[3]

Alternatively, the spouse can elect to receive early retirement Social Security spousal benefits

starting at age 62. The spouse's 50% benefit will be reduced by 25/36 of 1% for each month she

elects to receive benefits prior to the normal retirement age for the first three years prior to the

NRA and 5/12 of 1% for each additional month. If the normal retirement age is 65 and the

spouse elects to receive early retirement benefits at age 62, the reduction would be 25% and she

would receive 37.5% of the worker's benefit. This level of spousal benefits would be received

by the spouse while both the worker and spouse are alive. Upon the death of either the worker or

the spouse, the survivor of the couple will receive Social Security benefits at the same level that

the worker was receiving benefits. If the survivor of the couple is the spouse and she is older

than the normal retirement age for survivor retirement benefits when the worker dies, her

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[1] A spouse receives Social Security benefits that are equal to the greater of the benefits she would receive based 1)
on her earnings record as a worker or 2) as a spouse, on the earnings record of a worker, called spousal benefits.
This paper only concerns her early retirement decisions if she will receive spousal benefits. The prior paper already
covered any early retirement implications for a worker.
[2] The normal retirement age for full spousal benefits is scheduled to gradually increase from age 65 to age 67.
[3] The worker must be receiving Social Security benefits before a spouse can start receiving spousal benefits. The
spouse's benefit does not include any delayed claim credits that are part of a worker's Social Security benefits. It
will reflect any early retirement reductions to the worker's benefits.

benefits will increase from 37.5% of the worker's benefit to 100% of the worker's benefit.   If

she is younger than the normal retirement age for survivor benefits, she will receive the worker's

benefit, but at a reduced level .[4],[5] Because the spouse's benefit will increase to equal the

worker's benefit upon the worker's death if the spouse is at or above the NRA, the early

retirement analysis for a spouse is more complicated than the early retirement analysis facing a

worker.

Present Value Calculations for Early and Normal Retirement Spousal Elections

To determine if there is a financial advantage to the spouse if she elects early retirement

Social Security benefits, let us compare the present values at age 62 if 1) the spouse elects early

retirement benefits at age 62 or 2) waits until age 65 to elect full spousal Social Security benefits.

For these calculations we assume the worker is age 65 and receiving full Social Security benefits,

and the spouse is three years younger at age 62. We will omit the value of the worker's benefit

from these calculations because it will be the same regardless of the election made by the spouse.

And under the two scenarios we are comparing (normal and early retirement spousal election),

the present value of the survivor benefits can also be shown to be essentially equal.[6] The

demonstration for this assertion is contained in Appendix I. Therefore, just as we omitted the

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[4] The normal retirement age for survivor retirement benefits is also scheduled to increase gradually from age 65 to 67. The early retirement reduction for survivor benefits is calculated differently than the early retirement reduction in benefits for worker or spousal benefits and will be discussed later in the paper.

[5] If a spouse is receiving spousal benefits on a worker's record when he dies, the Social Security administration will automatically convert her spousal benefits to survivor benefits. If she is below the NRA at the time of the worker's death, she will receive a reduced level of survivor benefits for life. She will not have the option to continue to receive spousal benefits until the NRA and then convert to unreduced survivor benefits.

[6] There is one small, but immaterial difference, for these survivor benefit calculations. As indicated in footnote 5, a spouse receiving early retirement benefits will be automatically converted to survivor benefits upon the workers death even if she is below the NRA for full survivor benefits. In contrast, a spouse who is not receiving early retirement spousal benefits can wait until the NRA before applying for survivor benefits and receive them at an unreduced level. This additional option will not materially impact the present value derivations in Appendix I for the reasons stated there.

worker's benefit from these calculations, we will omit the value of the survivor benefit from these calculations and only compare the spousal portion of the benefits under normal and early retirement elections.

The present values of the normal and early retirement spousal benefit elections are shown below (ignoring the worker's benefit and ignoring the survivor portion of the spousal benefit). These values are calculated at the spouse's age 62 and use the same assumptions contained in our earlier paper (i.e. 9% earnings, etc.).

Option I: Full Spousal Benefit at Age 65 Election

$$P.V. = \frac{.5\ B_{62}\ (1-T)\ (_3 p_{62}\ _3 p_{65})\ a_{65:68,}}{(1+e)^3} \text{ where}$$

$a_{65:68} =$ Annuity factor calculated at after tax, after CPI adjusted interest rate with benefits payable for as long as both the worker (age 68) and spouse (age 65) survives, and

all other symbols as previously defined (in earlier paper to the same audience)

$$= \frac{(.5)\ (\$12000)\ (1-T)\ (.962)\ (11.60)}{(1.1275)}$$

$$= \$59,384\ (1-T)$$

Option II: Early Retirement Age 62 Election

$$P.V. = (.75)\ (.5)\ B_{62}\ (1-T)\ (a_{62:65})$$
$$= (.375)\ (\$12000)\ (1-T)\ (12.70)$$

$$= \$57,150\ (1-T)$$

Conclusion

As shown above, the present value calculation for Option I is greater than the present value for Option II under the assumptions used. It is equal to a gain of about 4.0% over the

three-year period. Once again, this gain of about 1.25%per year is not large, but it does support the notion that a spouse in good health (married to a worker who is also in good health) can consider postponing the election of spousal retirement benefits until she reaches normal retirement age. The greater gain for a spouse postponing receipt of benefits (versus a worker) occurs because there is a larger actuarial reduction when a spouse makes an early retirement election versus the reduction when a worker makes an early retirement election. This is offset to some degree because the early retirement benefit reduction will only last during the joint lifetime of both the worker and spouse. The spouse's Social Security benefit will, in most cases, become equal to 100% of the worker's benefit upon the death of the worker.

In general, the factors affecting an early retirement decision for a spouse would be the same as for a worker. The lower the before tax interest earnings assumption, the more advantageous the normal retirement election from a financial perspective. The higher the tax assumption, the more advantageous the normal retirement election from a financial perspective. Conversely, the higher the before tax interest assumption, the more advantageous the early retirement election from a financial perspective and the lower the tax assumption, the more advantageous the early retirement election.

In addition, if both the spouse and worker (couple) expect to survive beyond a normal joint expectation of life, as represented by the A2000 Merged Gender Mortality table set back 2 years, the more advantageous the normal retirement election. Conversely, if the couple does not expect to live a normal life expectancy, the more advantageous the early retirement election from a financial perspective. Under the interest, CPI and marginal tax rate assumptions used in this analysis, it would take between 12 and 13 years for the accumulated funds for a spouse electing

normal retirement benefits (assumed to be age 65) to exceed the accumulated funds for a spouse

electing early retirement age 62 benefits. This is less than the approximately 16.5 year joint life

expectancy (period when both survive) assumed for an age 65 spouse and an age 68 worker

under the A2000 MGM mortality table set back 2 years. This calculation also demonstrates that

if either the spouse or worker is not in good health, and either would not expect to live for at

least 12 years in retirement, the spouse should consider making an early retirement spousal

election.

For completeness, let us now briefly examine the financial advantages of a

surviving spouse electing, or not electing, to receive survivor retirement benefits prior to the

NRA for such benefits. [7]

Widow or Survivor Benefit for Spouses

A surviving spouse is eligible for Social Security retirement benefits that are the higher of

(1) the Social Security benefits she would receive based on her own earnings record or (2) the

survivor benefit she would receive based on her married partner's earnings record. If she

receives benefits based on her earnings record, the early retirement considerations outlined in our

earlier paper apply and no survivorship benefits would be paid. However, if she receives

survivorship benefits based on her married partner's earnings record, a unique set of early

retirement factors apply. This makes the decision making process slightly different.

A surviving spouse is eligible for full survivorship benefits, which would be equal to her

partner's retirement benefit, at her normal retirement age.[8] The normal retirement age (NRA) for

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[7] Retirement benefits for a surviving spouse are different from the mother or father's benefits that are paid to a surviving spouse of any age during the period that she is caring for a child under age 16.

a surviving spouse is currently age 65 but is scheduled to gradually increase to age 67. If the

surviving spouse elects survivor benefits early she can do so starting at age 60, but there will be

an actuarial reduction associated with such election.   This reduction factor works differently than

the early retirement reduction factors for worker and spousal benefits. A surviving spouse

claiming benefits at age 60 will receive 71.5% of the worker's benefits regardless of the normal

retirement age, which will be between age 65 and 67. For claims between age 60 and the normal

retirement age, the actuarial reduction factor is obtained by linear interpolation. For example,

when the NRA is 65, the early retirement factor for age 62 is 82.9% (a 17.1% reduction).

Similarly, when the NRA is age 67, the early retirement factor for exact age 62 is 79.64%. This

is two sevenths of the way between 71.5% and 100% and is equal to a 20.36% reduction.

Present Value Calculations for Early and Normal Retirement Survivor Benefit Elections

If we calculated the present value of survivor benefits at the surviving spouse's age 60 for

(1) an age 60 early retirement benefit election or (2) an age 65 full benefit election under the

same assumptions used previously (9% interest, etc.), we would discover that these two present

values are fairly close under the assumptions used (9% interest).   However, as we will see

shortly the early retirement election will become more preferable as the age at which the decision

is made gets closer to the normal retirement age.[9] The early retirement election will also become

more preferable as the NRA increases to age 67.   The later occurs because there will be no

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[8] Unlike the calculation for spousal benefits, the calculation for survivor benefits will include any delayed claim credits that the worker was entitled to because he postponed retirement beyond the normal retirement age.

[9] In effect, the yearly gain for postponing the election of benefits reduces as a person ages. This is because the interest and mortality factors affecting the early retirement calculations are compounded over the period whereas the actuarial reduction factors are not.

increase in the actuarial reduction factor for an age 60 early benefit election as the normal retirement age increases from age 65 to age 67.

The following Table I shows the after-tax, breakeven interest rate when a surviving spouse is deciding whether to elect early retirement benefits, at a reduced level, or full benefits at her NRA. The table shows these breakeven interest rates for a NRA of 65 and also for a NRA of 67, which will ultimately be the normal retirement age. As explained in the earlier paper, the after-tax break even interest rate is the rate such that the early retirement and normal retirement present value calculations are equal. If a person can earn this rate, after paying taxes, there would be no financial reason to choose early retirement instead of normal retirement, and visa versa. These after tax rates could be converted to before tax earnings rates by dividing the after tax rate shown in Table 1 by .8. This is because the assumed marginal tax rate on investment earnings was 20%. Any combination of before tax earnings rates and marginal tax rates that produced the after tax earnings rates shown in Table 1 would make the present value calculations for normal and early retirement equal. To the extent a person could earn more than these rates, after taxes, an early retirement election becomes more preferable. To the extent that a person could not earn these after tax rates, the normal retirement election becomes more preferable.

Breakeven After Tax, Earning Rate For An Early Retirement Benefit Election by a Surviving Spouse Versus a Full Benefit Election at the Normal Retirement by a Surviving Spouse

Early Benefit Election Age	When NRA is 65	When NRA is 67
60	7.4%	4.3%
61	7.0%	3.9%
62	6.5%	3.6%
63	6.1%	3.3%

64	5.7%	3.0%
65	NA	2.7%
66	NA	2.4%

Conclusion

Once again, the factors affecting an early benefit election for a surviving spouse are similar to the factors affecting an early retirement decision for a worker and spouse. The higher the before tax interest assumption and the lower the tax assumption, the more advantageous the early retirement election. In addition, a surviving spouse in poor health, or one who does not expect to live a normal lifespan, would be advised to make an early benefit election.

The breakeven after tax interest rates to justify an early retirement election for a survivor are lower than for a worker or spouse. This means that a survivor could be more inclined from a financial perspective to elect early retirement benefits than a worker or spouse, all other factors being equal. And under the survivor benefit calculations, an early benefit election produces greater value as the normal retirement age is increased from age 65 to age 67 for the reasons stated in the paper.

Appendix I

Demonstration That For A Spouse Eligible To Receive Spousal Benefits, the Present Value At Age 62 of Her Survivorship Retirement Benefits Are Equal, Irrespective of her Decision to 1) Elect Early Retirement Spousal Benefits at Age 62 or 2) Wait Until Normal Retirement Age To Receive Full Spousal Benefits

The spouse of a worker receives Social Security retirement benefits equal to the greater of the benefits she would receive based 1) on her earnings record as a worker or 2) as a spouse, based on the earnings record of a worker, called spousal benefits. If she receives spousal benefits, she can elect to receive them, at a reduced level, starting at age 62 or wait until the normal retirement age (currently age 65) and receive unreduced spousal benefits. Full spousal benefits are equal to 50% of the worker's benefits.

Spousal benefits are received by the spouse while both the worker and spouse are alive. Upon the death of either the worker or spouse, spousal benefits cease. If the spouse dies first, spousal retirement benefits cease and no survivorship retirement benefits are paid (of course, the worker will continue to receive his benefits). However, if the worker dies first, the spouse becomes eligible for survivorship retirement benefits, which are equal to 100% of the benefits that were being paid to the worker. This Appendix will demonstrate that, the present value at age 62 of the survivorship retirement benefits are equal irrespective of the spousal decision 1) to elect early retirement spousal benefits at age 62 or 2) wait until normal retirement age to collect unreduced spousal benefits. If we can achieve this, we can compare the values of an early retirement spousal election versus a normal retirement spousal election without including a calculation for the residual survivorship retirement benefit. This was the comparison made in the body of this paper.

Let us now examine the present value at spousal age 62 of the survivorship benefit under an age 62 early retirement spousal election and an age 65 normal retirement spousal election. For ease of understanding, the formulae will assume annual elections of benefits. If we were to

use the formulae for actual computations, we would modify it to allow for monthly elections of

benefits. The spouse is assumed to be age 62 and the worker is assumed to be age 65.

Option I: **Present Value at Age 62 of Survivorship Benefits If Spouse Elects Age 62**

                     Early Retirement Spousal Benefits

$$P.V. = B_{62} (1-T) 9 (.829) a_{62}\ p_{62}\ q_{65} + (.886) \frac{a_{63}\ _2p_{62}\ p_{65}\ q_{66}}{(1+e)}$$

$$+ (.943) \frac{a_{64}\ _3p_{62}\ _2p_{65}\ q_{67}}{(1+e)^2}$$

$$+ \frac{_3p_{62}\ _3p_{65}}{(1+e)^3} (a_{65}p_{65}\ q_{68} + \frac{a_{66}\ _2p_{65}\ p_{68}\ q_{68}}{(1+e)} + \ldots) A$$

where (.829), (.886) and (.943) are early retirement reduction factors for survivorship

retirement benefits

q_x = probability of death at age x, and

all other symbols previously defined

Option II: **Present Value at Age 62 of Survivorship Benefits If Spouse Elects Age 65**

                     Normal Retirement Spousal Benefits

P.V. = identical formulae to the Option I present value[10]

After much analysis and uncertainty before arriving at the above conclusion, we

can now impose general reasoning on the above conclusion. First, survivorship retirement

benefits are paid to the spouse, but only if she survives the worker. They are not paid under any

other contingency.[11] The spouse is eligible to start receiving such survivorship benefits in any

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[10] There are a number of intermediate steps that would be recorded before arriving at this final formulae. Their reproduction would not be a complicated exercise for a knowledgeable reader. I omitted them because I did not think their reproduction justified adding a page of formulae to the Appendix. In addition, their reproduction would not add value for a reader only interested in the conclusion.

[11] If both the worker and spouse dies, or if the spouse dies before the worker, no benefits are paid to the spouse. If both the spouse and worker survive, spousal retirement benefits, and not survivor benefits, are paid to the spouse.

year that she survives the worker.   This eligibility exists irrespective of whether early retirement

spousal benefits were elected or not. Therefore, there is the same contingent probability[12] that

such survivor payments will commence at every age that both the worker and spouse survive.

As noted in footnote 6, there is a small, but immaterial, difference in the early versus normal

retirement elections that is not directly accounted for the above Option I and Option II

calculations. A spouse receiving early retirement benefits will be automatically converted to

survivor benefits upon the worker's death even if she is below the NRA for full survivor

benefits. In contrast, a spouse who is not receiving early retirement spousal benefits can wait

until the NRA before applying for survivor benefits and receive them at an unreduced level for

life. This additional option for someone with the option to take normal retirement spousal

benefits will not change the present value calculations materially. First, it only affects the first

three terms in the calculations and the early retirement survivor benefits are close in value to the

normal retirement survivor benefits using reasonable assumptions.   In many cases, the early

retirement survivor benefit value will exceed the normal retirement survivor benefit value.

Therefore, even if we substituted the present value of a NRA election for the early retirement

present value used in the equation at these few ages (age 62, 63 and 64), the substituted value

would be essentially the same as the value used in the equation. In addition, each of the terms in

the present value calculation is multiplied by the probability of death, which is very small in

value. Therefore, a small change in value for any one term in this calculation will not materially

affect the present value calculations.

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[12] This contingent probability is that the spouse will survive and the worker die during the subsequent year.

Since the present value of these two options are essentially identical, we can omit the value of the survivorship retirement benefit when analyzing a decision to elect, or not elect, early retirement spousal benefits.