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What is the optimal age for withdrawing Social Security Benefits? Full Retirement Age, Late Withdrawal Age of 70, or Early Withdrawal Age of 62

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ABSTRACT

When to retire is an individual decision based on many criteria like health of the individual, family responsibilities, expected life of the individual, single family income or dual family income, and other such considerations. A financial consideration can also be made. Retiring early will imply a reduction in social security benefits for the rest of your life. Retiring later than your full retirement age can mean a significant bump in benefits for the rest of your life. This paper simulates different conditions to estimate how long a life one needs to live to recover from the reduction in benefits resulting from earlier retirements. Specifically, we model four permutations of the time value of money and the marginal tax rate on early benefits. Our results show there are significant advantages of withdrawing early benefits in most cases where life expectancy is shorter. But when expected life terms are much higher above 83, delaying retirement can significantly enhance the payout of benefits.

Keywords: Retirement benefits, Social Security Benefits, Time value of money, Retirement age

INTRODUCTION

As Americans reach retirement age, social security benefits become important to them. Hence, an important question for every American is to know when to start collecting social security benefits to maximize their returns? The key to this answer lies in understanding the financial impact of benefits received at the full retirement age (hereafter, FRA) versus late withdrawal age (hereafter, LWA) or early withdrawal age (hereafter, EWA).

FRA is the age at which a person first becomes eligible to full or unreduced retirement benefits which currently is 65 to 67 years depending on your year of birth [2]. LWA is the age until which your monthly benefits continue increasing, which is 70 years as per the current policies. Early

retirement starts with the lowest age at which one qualifies to receive social security benefits which is 62 years currently.

This paper tries to explore the possible answers to the questions above using some real numbers. This paper is an attempt to answer these questions by looking into Social Security Administration (SSA) guidelines and analyzing the benefits using excel. This paper tries to find the number of years required to reach the breakeven point in life under two scenarios;

1. collecting benefits at EWA versus FRA and
2. collecting benefits at LWA versus FRA

The right decision is not simple and depends on various factors like health situation, family situation, tax effects, life expectancy, and income from other sources –among others.

BACKGROUND

In the past, if you were born in the year 1937 or earlier, the full retirement age was considered as 65 years. You could draw reduced social security benefits before the age of 65 but you were eligible to receive full benefits starting at the retirement age of 65. However, the existing Social Security Administration policies have gradually changed the full retirement age from 65 years to 67 years depending on the year in which you were born [2].

For example, Table 1 shows that the full retirement age was 65 for persons born in 1937 (or earlier) but increased by 2 months every subsequent year until the year 1943. Then for persons born in the year 1943 through 1954, the full retirement age stayed at 66 years. Social Security Administration again modified the formula by adding 2 months for each subsequent year for persons born between 1955 and 1960. In others words, the full retirement age is 66 years and 2 months for persons (born in 1955); 66 years and 4 months for persons (born in 1956); 66 years and 6 months for persons (born in 1957); 66 years and 8 months for persons (born in 1958); 66 years and 10 months for persons (born in 1959); and 67 years for persons born in the year 1960 or later. Thus, as per the current SSA regulations, the full retirement age depends on retirees' birth year.

Table 1: Full Retirement Age Table as per the Birth Year

Birth Year	Full Retirement Age
1937 or earlier	65 years
1938	65 years and 2 months
1939	65 years and 4 months
1940	65 years and 6 months
1941	65 years and 8 months
1942	65 years and 10 months
1943 to 1954	66 years
1955	66 years and 2 months
1956	66 years and 4 months
1957	66 years and 6 months
1958	66 years and 8 months
1959	66 years and 10 months
1960 or later	67 years

Every retiree has an option of receiving full social security benefits at FRA, reduced benefits starting from the age of 62, or even enjoying higher benefits by delaying collection after FRA until age of 70. You cannot receive social security benefits before the age of 62 (unless disabled), and it is a major financial loss to delay receiving the monthly paycheck from social security administration beyond the age of 70. Hence, the million dollar question is —what is the optimal age to start receiving the social security benefits?

You can retire at any time between age 62 and full retirement age assuming that you have built up enough credits to be eligible to receive social security benefits. However, if you start benefits early, your benefits are reduced a fraction of a percent for each month before your full retirement age There are pros and cons of receiving social security paycheck (also called as Primary Insurance Amount) before reaching the full retirement age. On the positive side, you receive benefits for a longer period of time even as the benefits are reduced for the rest of your life [4]. In fact, if you start withdrawing before reaching your FRA age, there may be a penalty even on the reduced social security benefits depending on your income level. Complete tables extracted from the Social Security Administration website are included in appendix (See tables A1 and A2 in appendix).

DATA

Social Security Benefits tables are collected from the Social Security Administration website. The complete tables (A1and A2) are included in the appendix for your quick reference. A selected data of reduced benefits versus full benefits and terms used in this paper are shown in table 2 below.

Table 2 - Early Retirement Social Security Benefits Table (for persons born between 1943 and later)

	Year	1943-54	1955	1956	1957	1958	1959	1960
	FRA[1]	66 years	66y + 2m	66y + 4m	66y + 6m	66y + 8m	66y + 10m	67 years
Draw Benefits [a]		**% benefit[2]**						
62 years		75.00%	74.20%	73.3%	72.50%	71.70%	70.80%	70.00%
63 years		80	79.2	78.3	77.5	76.7	75.8	75
64 years		86.7	85.6	84.4	83.3	82.2	81.1	80
65 years		93.3	92.2	91.1	90	88.9	87.8	86.7
66 years		100	98.9	97.8	96.7	95.6	94.4	93.3
66y + 2m			100	98.9	97.8	96.7	95.6	94.4
66y + 4m				100	98.9	97.8	96.7	95.6
66y + 6m					100	98.9	97.8	96.7
66y + 8m						100	98.9	97.8
66y + 10m							100	98.9
67 years								100

[a]-If you start getting benefits at this age (years + months)

[1]FRA- Full Retirement Age

[2] % Reduction in Benefits if one starts withdrawing before FRA due to the extra number of months that the benefits are received. For example, you receive 48 extra months of benefits if you start withdrawing at the age of 62 and FRA is 66.

*If your birthday is on the 1st of the month, we figure your benefit as if your birthday were in the previous month. Remember, the earliest a person can start receiving Social Security retirement benefits will remain age 62. SS specifically mentions reductions in benefits if started at the age of 62

Above table shows that the full retirement age is 66 years if you are born between years 1943 to 1954. If person X was born in 1954, and he/she decides to collect social security benefits at early retirement age of 62, he/she will receive only 75 percent of the social security benefits they are entitled to at the time of full retirement age. Assuming individual X's monthly social security check was to be $1,000 at FRA, he/she will get only $750 per month if he/she starts collecting at the age of 62. As stated earlier, he/she may also have to pay some penalty even on the reduced benefits depending on income level at that age of 62.

Take another example that Mrs. Y was born in 1957, her FRA is 66 years and 6 months (see table 2). If she decides to start collecting her social security benefits at the age of 63, she is entitled to receive only 77.5 percent of the total benefits allowed at her FRA. Suppose she is entitled to receive monthly social security benefit of $2,500 at her FRA of 66 ½ years, she would receive only $1,937.50 per month ($2,500 times 77.5%) if she starts collecting social security benefits at the age of 63. Thus, she would receive additional money equaling $81,375 ($1,937.50 monthly times 42 additional months between the age of 63 and 66 ½ years). This looks very positive. The negative side is that she would receive only $1,937.50 per month for the rest of her life. Had she waited until reaching her FRA of 66 ½ years, she would have received $2,500 per month during her remaining life. Which is the better choice –this paper tries to explore the possible answers to this question.

ANALYSIS AND RESULTS

As stated earlier, a person is entitled to receive social security benefits as early as the age of 62 (EWA). You may opt to get social security benefits at FRA (varies from 65 to 67 depending on your year of birth). Another choice is start tapping benefits at the age of 70 (LWA). In this analysis, we started looking at both scenarios stated above (i) collecting benefits at EWA versus FRA, and (ii) collecting benefits at LWA versus FRA.

SCENARIO (i) - Collecting Benefits at EWA versus FRA

We assume that monthly benefits would be $1,000 at the full retirement age for an individual. Further assume that an individual was born in 1954 and he/she decides to start collecting social security benefits at the age of 62. According to table 2, this person would receive a monthly check of $750 (75% of $1,000). We run a thorough analysis using excel to compute the breakeven point in his life when the financial impact of the benefits becomes indifferent between EWA of 62 versus FRA of 66.

First the analysis was run ignoring the time value of money concept. However, if you start receiving benefits at age 62 then you can earn return on your monthly payments until the full retirement age of 66. Similarly, you will have to pay taxes on the social security benefits received from EWA of 62 to FRA of 66. Therefore, we also completed breakeven analysis for this individual including time value of money effect and tax effect. Specifically, the following data in table 3 is used to complete the analysis in this scenario.

Table 3 Data used for Computing Breakeven Analysis

Please enter the following data	
Year of birth	1954
Benefits at full retirement age	$1,000
Benefits at Early Retirement Age of	$750
Interest rate for compounding	5.00%
Marginal tax rate at EWA	20.00%

This analysis is computed for the following four different situations
Part A - (Time Value is ignored and tax effect is excluded)
Part B - (Time Value is calculated using 5% annual rate but no tax effect is included)
Part C - (Time Value is ignored but tax effect is included assuming 20% marginal tax rate)
Part D - (Time Value is included using 5% annual rate and tax effect is included assuming 20% marginal tax rate)

The results of the analysis are reported in table 4.

Calculation for Part A of Table 4 (No Time Value of Money and no Tax Effects)
You start receiving monthly benefits of $750 from age of 62 to FRA of 66 totaling $36,000 ($750 times 48 months). However, from age 66 onwards you would receive only $750 per months which is $250 less than the entitled benefits of $1,000 at FRA. Thus, you are losing $250 per month for rest of your life.

Breakeven point in months = $36,000/$250 = 144 months or 12 years. That implies you need to live 12 years beyond FRA of 66 to reach breakeven or 78 years of age. If you do not live until 78, you are financially better by collecting social security benefits at the age of 62. On the other hand, if you live more than 78 years, it is financially advantageous to delay benefits until the full retirement age.

Calculation for Part B of Table 4 (Time Value using 5% return rate but no Tax Effects)
Assuming that you will deposit $750 per month from the age of 62 until you reach FRA of 66 in a separate account. How much would you have in this account when you are 66 years old?

$$FVA = \mathrm{A} * \frac{(1+i)^n - 1}{i}$$

$$FVA = \$750 * \frac{(1+5\%/12)^{4*12}-1}{5\%/12} \quad = \$750*53.01489 = \$39{,}761$$

Hence you have accumulated $39,761 in this account at the age of 66. Now you will start withdrawing $250 (to make your monthly benefits equal to $1,000; i.e., $750 monthly from Social Security and $250 monthly from this saved account) after the age of 66 until this account is exhausted

Hence $39,761 becomes present value of annuity from which you will withdraw $250 per month until the account is exhausted.

$$PVA = \text{A} * \frac{1-\frac{1}{(1+i)^n}}{i} \text{ or } \$39{,}761 = \$250 * \frac{1-\frac{1}{(1+5\%/12)^n}}{5\%/12}$$

The calculations using Excel (or financial calculator) show that n is 261 months. That implies you need to live 21 years and 9 months beyond FRA of 66 to reach breakeven. At the age of 87 years and 9 months, you have reached the breakeven point in your life. If you do not live until 87 years and 9 months, you have a financial advantage by collecting social security benefits at the age of 62. Please note the breakeven would be less than 21 years and 9 months if we had used return rate of less than 5% but still higher than 12 years (the answer in part A if we use time value of money concept).

Calculation for Part C of Table 4 (No Time Value but assume 20 marginal tax rate)

You start receiving monthly benefits of $750 from age of 62 to FRA of 66 totaling $36,000 ($750 times 48 months). However, you have to pay taxes on this amount.
Annual benefits = $9,000
Annual after tax benefits = Before tax benefits *(1- tax rate) = $9,000 (1-0.20) = $7,200
Total after tax benefits = 4 years times $7,200 per year = $28,800

Breakeven point in months = $28,800/$250 = 115 months or 9 years and 7 months. That implies you need to live 9 years and 7 months beyond FRA of 66. At the age of 75 years and 9 months, you have reached the breakeven point in your life. If you do not live until 75 years and 9 months, you have a financial advantage in getting benefits at the age of 62. On the other hand, if you live more than 75 years and 9 months, it is financially advantageous to delay benefits until the full retirement age.

Calculation for Part D of Table 4 (Time Value at 5% and 20 marginal tax rate)

Calculations are simply completed by combining methodology for part B and part C. Breakeven answer comes to 15 years and 2 months beyond the FRA. At the age of 81 years and 2 months, you have reached the breakeven point in your life. If you do not live until 81 years and 2 months, you have a financial advantage by collecting social security benefits at the age of 62. Please note the breakeven would be less than 15 years and 2 months if we had used return rate of less than 5% but still higher than 12 years (answer in part A).

Table 4 - Calculation for breakeven analysis of benefits at EWA versus FRA

How long you must live beyond FRA (66 or 67) to recover the lost benefits between EWA and FRA?							
Part A - (Time Value is ignored and tax effect is excluded)							
EWA[1]	62	Years	FRA[2]	66	and	0	Months
Number of extra months of benefits received if one starts withdrawing before FRA							48
Monthly difference in benefits between EWA and FRA at the time of FRA							$250
Total extra benefits received between EWA and FRA until FRA							$36,000
Number of months required to reach breakeven							144
Answer =	12	Years and	0	months			
Part B - (Time Value is calculated using 5% annual rate but no tax effect is included)							
Number of extra months of benefits received if one starts withdrawing before FRA							48
Monthly difference in benefits between EWA and FRA at the time of FRA							$250
Total extra benefits received between EWA and FRA until FRA							$39,761
Number of months required to reach breakeven							261
Answer =	21	Years and	9	months			
Part C - (Time Value is ignored but tax effect is included assuming 20% marginal tax rate)							
Number of extra months of benefits received if one starts withdrawing before FRA							48
Monthly difference in benefits between EWA and FRA at the time of FRA							$250
Total extra benefits received between EWA and FRA until FRA							$28,800
Number of months required to reach breakeven							115
Answer =	9	Years and	7	months			
Part D - (Time Value is included using 5% annual rate and tax effect is assuming 20% marginal tax rate)							
Number of extra months of benefits received if one starts withdrawing before FRA							48
Monthly difference in benefits between EWA and FRA at the time of FRA							$250
Total extra benefits received between EWA and FRA until FRA							$31,809
Number of months required to reach breakeven							182
Answer =	15	Years and	2	months			
[1] EWA - Early Withdrawal Age							
[2] FRA - Full Retirement Age							

In order to complete the analysis, we generated a table that shows breakeven points in life if you withdraw social security benefits at early retirement ages of 62 years, 63 years, 64 years, 65 years and 66 years. The results are shown in table 5.

Table 5: Results if one starts withdrawing Social Security Benefits before Reaching Full Retirement Age

Answer to the question											
How long must one live beyond FRA to recover the lost benefits due to the reduced benefits drawn at EWA?											
Birth Year	**FRA**		**EWA[5]**	**[1] Part A**		**[1] Part B**		**[1] Part C**		**[1] Part D**	
	Years	Months		Years	Months	Years	Months	Years	Months	Years	Months
1954	66	0	62	12	0	21	9	9	7	15	2
	66	0	63	12	0	20	10	9	7	14	7
	66	0	64	13	0	23	1	10	5	15	11
	66	0	65	13	11	24	12	11	2	16	11
1955	66	2	62	11	12	21	11	9	7	15	2
	66	2	63	12	1	21	2	9	8	14	9
	66	2	64	12	11	22	9	10	4	15	8
	66	2	65	13	9	24	8	11	0	16	9
1956	66	4	62	11	11	21	9	9	6	15	2
	66	4	63	12	0	21	3	9	7	14	10
	66	4	64	12	7	22	1	10	1	15	4
	66	4	65	13	8	24	5	10	11	16	7
1957	66	6	62	11	10	21	10	9	6	15	2
	66	6	63	12	1	21	6	9	8	14	11
	66	6	64	12	6	21	9	9	12	15	2
	66	6	65	13	6	24	1	10	10	16	5
1958	66	8	62	11	10	21	10	9	6	15	2
	66	8	63	12	1	21	8	9	8	15	1
	66	8	64	12	4	21	5	9	10	14	11
	66	8	65	13	4	23	9	10	8	16	3
1959	66	10	62	11	9	21	8	9	5	15	1
	66	10	63	12	0	21	8	9	7	15	1
	66	10	64	12	2	21	2	9	9	14	9
	66	10	65	13	2	23	5	10	7	16	1
1960	67	0	62	11	8	21	8	9	4	15	1
	67	0	63	12	0	21	9	9	7	15	2
	67	0	64	12	0	20	10	9	7	14	7
	67	0	65	13	0	23	1	10	5	15	11
[1] Part A - Time Value is ignored and tax effect is excluded											
[2] Part B -Time Value is calculated using 5% annual rate but no tax effect is included											
[3] Part C - Time Value is ignored but tax effect is included assuming 20% marginal tax rate											
[4] Part D - Time Value is included using 5% annual rate and tax effect at 20% marginal tax rate											
[5] EWA - Early Withdrawal Age of the Social Security Benefits											

SCENARIO (ii) Collecting Benefits at LWA versus FRA

Benefits generally increase by 8 percent per year until age of 70 if you delay benefits after FRA. We assume that an individual was born in 1954 and he/she decides to start collecting social security benefits at FRA of 66. We further assume that monthly benefits would be $2,600 at the full retirement age and $3,600 at LWA for an individual. Specifically, the following data in table 6 is used to complete the analysis in this scenario.

Table 6: Data used for Computing Breakeven Analysis

Please enter the following data	
Your Year of birth	1954
Benefits at full retirement age (FRA)	$2,600
Benefits at 70 years of age (LWA)	$3,600
Interest rate for compounding	5.00%
Marginal tax rate at FRA	20.00%

Methodology used here is identical to the one used in SCENARIO (i).

Results for Part A of Table 7 (No Time Value of Money and no Tax Effects)

You will receive monthly benefits of $2,600 from FRA (66 years) and if you wait you would get monthly $3,600 (about 8% annual increase) at LWA. So, if you start receiving benefits at FRA, you would receive additional $124,800 ($2,600 times 48 months) before you reach the age of 70. However, after reaching 70 years of age, you would continue receiving only $2,600 per month which is $1,000 less than the entitled benefits of $3,600 at LWA. Thus, you are losing $1,000 per month forever for your remaining life.

Breakeven point in months = $124,800/$1,000 = 125 months or 10 years and 5 months. That implies you need to live 10 years and 5 months beyond LWA of 70. At the age of 80 years and 5 months, you have reached the breakeven point in your life. If you do not live until 80 years and 5 months, you have a financial advantage by collecting social security benefits at the FRA age of 66. On the other hand, if you live more than 80 years and 5 months, it is financially advantageous to delay benefits until the late withdrawal age.

Results for Part B of Table 7 (Time Value using 5% return rate but no Tax Effects)

Assuming that you will deposit $2,600 per month from the age of 66 until you reach LWA of 70 in a separate account. How much would you have accumulated when you are 70 years old?

$$FVA = \text{A} * \frac{(1+i)^n - 1}{i} \text{ or } FVA = \$2{,}600 * \frac{(1+5\%/12)^{4*12}-1}{5\%/12} \quad = \$2{,}600 * 53.01489 = \$137{,}839$$

Hence you have accumulated $137,839 in this account by the age of 70. Now you will start withdrawing $1,000 (to make your monthly benefits equal to $3,600 = $2,600 monthly from Social Security + $1,000 monthly from this saved account) after the age of 70 until this account is exhausted

Hence $137,839 becomes present value of annuity from which you will withdraw $1,000 per month until the account is exhausted.

$$PVA = \text{A} * \frac{1-\frac{1}{(1+i)^n}}{i} \quad \text{or } \$137{,}839 = \$1{,}000 * \frac{1-\frac{1}{(1+5\%/12)^n}}{5\%/12}$$

Calculations using Excel (or financial calculator) give the answer for n as 205 months. That implies you need to 17 years and 1 month beyond LWA of 70 to reach breakeven. At the age of 87 years and 1 month, you have reached the breakeven point in your life. If you do not live until 87 years and 1 month, you have a financial advantage by collecting social security benefits at the age of 66. Please note the breakeven would be less than 17 years and 1 month if we had used return rate of less than 5% but still higher than 10 years and 5 months (the answer in part A if we use time value of money concept).

Results for Part C of Table 7 (No Time Value but assume 20 marginal tax rate)

You start receiving monthly benefits of $2,600 from age of 66 to LWA of 70 totaling $124,800 ($2,600 times 48 months). However, you have to pay taxes on this amount.
Annual benefits = $31,200 ($2,600 times 12)
Annual after tax benefits = Before tax benefits *(1- tax rate) = $31,200 (1-0.20) = $24,960
Total after tax benefits = 4 years times $24,960 per year = $99,840

Breakeven point in months = $99,840/$1,000 = 100 months or 8 years and 4 months. That implies you need to live 8 years and 4 months beyond LWA of 70. At the age of 78 years and 4 months, you have reached the breakeven point in your life. If you do not live until 78 years and 4 months, you have a financial advantage by collecting social security benefits at the age of 66. On the other hand, if you live more than 78 years and 4 months, it is financially advantageous to delay benefits until the LWA of 70 years.

Results for Part D of Table 7 (Time Value at 5% and 20 marginal tax rate)

Calculations are completed by combining methodology for part B and part C. Breakeven answer comes to 12 years and 8 months beyond the LWA. At the age of 82 years and 4 months, you have reached the breakeven point in your life. If you do not live until 82 years and 4 months, you have a financial advantage by collecting social security benefits at the age of 66. Please note the breakeven would be less than 12 years and 4 months if we had used return rate of less than 5% but still higher than 10 years and 5 months (answer in part A).

Table 7 - Calculation for breakeven analysis of benefits at FRA of 66 years versus LWA of 70 years

How long must you live beyond the age of 70 to recover the lost benefits between FRA and LWA?								
Part A - Time Value is ignored and tax effect is excluded								
FRA[1]	66	Years	and	0	Months	LWA[2]	70	years
Number of extra months of benefits received if start withdrawing at FRA								48
Monthly difference in benefits between FRA and LWA at the time of LWA								$1,000
Total extra benefits received between FRA and LWA until LWA								$124,800
Number of months required to reach breakeven								125
Answer =		10	Years and		5	months		
Part B - Time Value is calculated using 5% annual rate but no tax effect is included								
Number of extra months of benefits received if start withdrawing at FRA								48
Monthly difference in benefits between FRA and LWA at the time of LWA								$1,000
Total extra benefits received between FRA and LWA until LWA								$137,839
Number of months required to reach breakeven								205
Answer =		17	Years and		1	months		
Part C - Time Value is ignored but tax effect is included assuming 20% marginal tax rate								
Number of extra months of benefits received if start withdrawing at FRA								48
Monthly difference in benefits between FRA and LWA at the time of LWA								$1,000
Total extra benefits received between FRA and LWA until LWA								$99,840
Number of months required to reach breakeven								100
Answer =		8	Years and		4	months		
Part D - Time Value is included using 5% annual rate and tax effect is assuming 20% marginal tax rate								
Number of extra months of benefits received if start withdrawing at FRA								48
Monthly difference in benefits between FRA and LWA at the time of LWA								$1,000
Total extra benefits received between FRA and LWA until LWA								$110,271
Number of months required to reach breakeven								148
Answer =		12	Years and		4	months		
[1] FRA - Full Retirement Age (66 years)								
[2] LWA – Late Withdrawal Age (70 years)								

In order to complete the analysis, we generated a table that shows breakeven points in life if your FRA is anywhere between 66 year to 67 years. The results are shown in table 8.

Table 8: Analysis results as per the year of Birth

How long must you live beyond the age of 70 to recover the lost benefits due to taking benefits at FRA instead of at LWA?										
Birth Year	**FRA**		**[1] Part A**		**[2] Part B**		**[3] Part C**		**[4] Part D**	
	Years	Months	Years	Months	Years	Months	Years	Months	Years	Months
1954	66	0	10	5	17	1	8	4	12	4
1955	66	2	11	1	18	10	8	10	13	5
1956	66	4	11	3	19	1	8	12	13	7
1957	66	6	11	5	19	5	9	1	13	9
1958	66	8	11	7	19	9	9	3	13	12
1959	66	10	11	9	20	3	9	5	14	3
1960	67	0	11	7	19	6	9	3	13	10
[1]Part A - Time Value is ignored and tax effect is excluded										
[2] Part B -Time Value is calculated using 5% annual rate but no tax effect is included										
[3] Part C - Time Value is ignored but tax effect is included assuming 20% marginal tax rate										
4 Part D - Time Value is included using 5% annual rate and tax effect assuming 20% marginal tax rate										

CONCLUSION

In this paper, we tried to identify if it is advantageous to start collecting benefits at an early retirement age of 62 or wait until full retirement age of (66 or 67) or wait even later till 70.

Results in table 5 show that if you decide to start collecting social security benefits before full retirement age then you should start collecting them as early as you are qualified to so, i.e., at the age of 62 years. When no time value of money is included in the analysis, the earlier you collect benefits the shorter will be the breakeven time when the financial impact of the benefits becomes indifferent between EWA of 62 versus FRA of 66. This is true regardless of your full retirement age (66 years, 66 years 2 months, 66 years 4 months, 66 years 6 months, 66 years 8 months, 66 years 10 months or 67 years). It is true when we ignore the time value of money and the tax effect as shown in part A and part C of table 5.

Once the time value of money is included into the analysis (with or without tax effects), it is also strongly recommended to start withdrawing social security benefits as soon as you qualify. Do not wait until full retirement age.

We also explored if it is financially lucrative to start getting benefits at full retirement age (66 or 67) or to delay taking benefits until the higher benefit age of 70 years. Results in table 8 show that in the absence of the time value of money effect, breakeven age ranges from 80 years 5 months for persons born in 1954 (or earlier) and 81 years and 11 month for persons born in 1959. Since the average life expectancy is 83 years, it seems financially advisable to start withdrawing benefits at FRA. Once the time value of money is included into the analysis (with or without tax effects), it is even more strongly recommended to start withdrawing social security benefits as soon as you qualify. Do not wait until full retirement age.

Regardless of when you start withdrawing social security benefits, you must apply for Medicare benefits within 3 months of your 65th birthday. If you fail to do so, your Medicare medical insurance

(part B) along with prescription drug coverage (part D) would cost more as a permanent penalty will be applied to your Medicare plan by Social Security Administration. [3].

The question of evaluating the effect of early or late withdrawals of benefits when considering both spouses' retirement is a topic suitable for exploring in a future paper.

References

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APPENDICES

Appendix A

Table A1 - Social Security Benefits Table (for persons born between 1943 and later)

	Year	FRA[1]	Year	FRA[1]	Year	FRA[1]	Year	FRA[1]	Year	FRA[1]	Year	FRA[1]	Year	FRA[1]
	1943-54	66	1955	66+2m	1956	66+4m	1957	66+6m	1958	66+8m	1959	66+10m	1960	67
	% benefit[2]		% benefit[2]		% benefit[2]		% benefit[2]		% benefit[2]		% benefit[2]		% benefit[2]	
Item a	Item b	Item c	Item b	Item c	Item b	Item c	Item b	Item c	Item b	Item c	Item b	Item c	Item b	Item c
62	75.00%	35.00%	74.20%	34.60%	73.3%	34.2%	72.50%	33.80%	71.70%	33.30%	70.80%	32.90%	70.00%	32.50%
62 + 1 month	75.4	35.2	74.6	34.8	73.8	34.4	72.9	34	72.1	33.5	71.3	33.1	70.4	32.7
62 + 2 months	75.8	35.4	75	35	74.2	34.6	73.3	34.2	72.5	33.8	71.7	33.3	70.8	32.9
62 + 3 months	76.3	35.6	75.4	35.2	74.6	34.8	73.8	34.4	72.9	34	72.1	33.5	71.3	33.1
62 + 4 months	76.7	35.8	75.8	35.4	75	35	74.2	34.6	73.3	34.2	72.5	33.8	71.7	33.3
62 + 5 months	77.1	36	76.3	35.6	75.4	35.2	74.6	34.8	73.8	34.4	72.9	34	72.1	33.5
62 + 6 months	77.5	36.3	76.7	35.8	75.8	35.4	75	35	74.2	34.6	73.3	34.2	72.5	33.8
62 + 7 months	77.9	36.5	77.1	36	76.3	35.6	75.4	35.2	74.6	34.8	73.8	34.4	72.9	34
62 + 8 months	78.3	36.7	77.5	36.3	76.7	35.8	75.8	35.4	75	35	74.2	34.6	73.3	34.2
62 + 9 months	78.8	36.9	77.9	36.5	77.1	36	76.3	35.6	75.4	35.2	74.6	34.8	73.8	34.4
62 + 10 months	79.2	37.1	78.3	36.7	77.5	36.3	76.7	35.8	75.8	35.4	75	35	74.2	34.6

62 + 11 months	79.6	37.3	78.8	36.9	77.9	36.5	77.1	36	76.3	35.6	75.4	35.2	74.6	34.8
63	80	37.5	79.2	37.1	78.3	36.7	77.5	36.3	76.7	35.8	75.8	35.4	75	35
63 + 1 month	80.6	37.8	79.6	37.3	78.8	36.9	77.9	36.5	77.1	36	76.3	35.6	75.4	35.2
63 + 2 months	81.1	38.2	80	37.5	79.2	37.1	78.3	36.7	77.5	36.3	76.7	35.8	75.8	35.4
63 + 3 months	81.7	38.5	80.6	37.8	79.6	37.3	78.8	36.9	77.9	36.5	77.1	36	76.3	35.6
63 + 4 months	82.2	38.9	81.1	38.2	80	37.5	79.2	37.1	78.3	36.7	77.5	36.3	76.7	35.8
63 + 5 months	82.8	39.2	81.7	38.5	80.6	37.8	79.6	37.3	78.8	36.9	77.9	36.5	77.1	36
63 + 6 months	83.3	39.6	82.2	38.9	81.1	38.2	80	37.5	79.2	37.1	78.3	36.7	77.5	36.3
63 + 7 months	83.9	39.9	82.8	39.2	81.7	38.5	80.6	37.8	79.6	37.3	78.8	36.9	77.9	36.5
63 + 8 months	84.4	40.3	83.3	39.6	82.2	38.9	81.1	38.2	80	37.5	79.2	37.1	78.3	36.7
63 + 9 months	85	40.6	83.9	39.9	82.8	39.2	81.7	38.5	80.6	37.8	79.6	37.3	78.8	36.9
63 + 10 months	85.6	41	84.4	40.3	83.3	39.6	82.2	38.9	81.1	38.2	80	37.5	79.2	37.1
63 + 11 months	86.1	41.3	85	40.6	83.9	39.9	82.8	39.2	81.7	38.5	80.6	37.8	79.6	37.3
64	86.7	41.7	85.6	41	84.4	40.3	83.3	39.6	82.2	38.9	81.1	38.2	80	37.5
64 + 1 month	87.2	42	86.1	41.3	85	40.6	83.9	39.9	82.8	39.2	81.7	38.5	80.6	37.8
64 + 2 months	87.8	42.4	86.7	41.7	85.6	41	84.4	40.3	83.3	39.6	82.2	38.9	81.1	38.2
64 + 3 months	88.3	42.7	87.2	42	86.1	41.3	85	40.6	83.9	39.9	82.8	39.2	81.7	38.5
64 + 4 months	88.9	43.1	87.8	42.4	86.7	41.7	85.6	41	84.4	40.3	83.3	39.6	82.2	38.9
64 + 5 months	89.4	43.4	88.3	42.7	87.2	42	86.1	41.3	85	40.6	83.9	39.9	82.8	39.2
64 + 6 months	90	43.8	88.9	43.1	87.8	42.4	86.7	41.7	85.6	41	84.4	40.3	83.3	39.6
64 + 7 months	90.6	44.1	89.4	43.4	88.3	42.7	87.2	42	86.1	41.3	85	40.6	83.9	39.9
64 + 8 months	91.1	44.4	90	43.8	88.9	43.1	87.8	42.4	86.7	41.7	85.6	41	84.4	40.3
64 + 9 months	91.7	44.8	90.6	44.1	89.4	43.4	88.3	42.7	87.2	42	86.1	41.3	85	40.6
64 + 10 months	92.2	45.1	91.1	44.4	90	43.8	88.9	43.1	87.8	42.4	86.7	41.7	85.6	41
64 + 11 months	92.8	45.5	91.7	44.8	90.6	44.1	89.4	43.4	88.3	42.7	87.2	42	86.1	41.3
65	93.3	45.8	92.2	45.1	91.1	44.4	90	43.8	88.9	43.1	87.8	42.4	86.7	41.7
65 + 1 month	93.9	46.2	92.8	45.5	91.7	44.8	90.6	44.1	89.4	43.4	88.3	42.7	87.2	42

65 + 2 months	94.4	46.5	93.3	45.8	92.2	45.1	91.1	44.4	90	43.8	88.9	43.1	87.8	42.4
65 + 3 months	95	46.9	93.9	46.2	92.8	45.5	91.7	44.8	90.6	44.1	89.4	43.4	88.3	42.7
65 + 4 months	95.6	47.2	94.4	46.5	93.3	45.8	92.2	45.1	91.1	44.4	90	43.8	88.9	43.1
65 + 5 months	96.1	47.6	95	46.9	93.9	46.2	92.8	45.5	91.7	44.8	90.6	44.1	89.4	43.4
65 + 6 months	96.7	47.9	95.6	47.2	94.4	46.5	93.3	45.8	92.2	45.1	91.1	44.4	90	43.8
65 + 7 months	97.2	48.3	96.1	47.6	95	46.9	93.9	46.2	92.8	45.5	91.7	44.8	90.6	44.1
65 + 8 months	97.8	48.6	96.7	47.9	95.6	47.2	94.4	46.5	93.3	45.8	92.2	45.1	91.1	44.4
65 + 9 months	98.3	49	97.2	48.3	96.1	47.6	95	46.9	93.9	46.2	92.8	45.5	91.7	44.8
65 + 10 months	98.9	49.3	97.8	48.6	96.7	47.9	95.6	47.2	94.4	46.5	93.3	45.8	92.2	45.1
65 + 11 months	99.4	49.7	98.3	49	97.2	48.3	96.1	47.6	95	46.9	93.9	46.2	92.8	45.5
66	100	50	98.9	49.3	97.8	48.6	96.7	47.9	95.6	47.2	94.4	46.5	93.3	45.8
66 + 1 month			99.4	49.7	98.3	49	97.2	48.3	96.1	47.6	95	46.9	93.9	46.2
66 + 2 months			100	50	98.9	49.3	97.8	48.6	96.7	47.9	95.6	47.2	94.4	46.5
66 + 3 months					99.4	49.7	98.3	49	97.2	48.3	96.1	47.6	95	46.9
66 + 4 months					100	50	98.9	49.3	97.8	48.6	96.7	47.9	95.6	47.2
66 + 5 months							99.4	49.7	98.3	49	97.2	48.3	96.1	47.6
66 + 6 months							100	50	98.9	49.3	97.8	48.6	96.7	47.9
66 + 7 months									99.4	49.7	98.3	49	97.2	48.3
66 + 8 months									100	50	98.9	49.3	97.8	48.6
66 + 9 months											99.4	49.7	98.3	49
66 + 10 months											100	50	98.9	49.3
66 + 11 months													99.4	49.7
67													100	50
item a-If you start getting benefits at age (years + months)														
Item b (for applicant) -And you are the: Wage Earner, the Retirement Benefit you will receive is reduced to														
Item c (for spouse) - And you are the: Spouse, the Retirement Benefit you will receive is reduced to														
[1]FRA- Full Retirement Age														

[2] % Benefits are reduced if start withdrawing before FRA due to extra months that the benefits are received.												
For example, you receive 48 extra months of benefits if start withdrawing at the age of 62 and FRA is 66.												
*If your birthday is on the 1st of the month, we figure your benefit as if your birthday were in the previous month.												
Remember, the earliest a person can start receiving Social Security retirement benefits will remain age 62.												
SS specifically mentions reductions in benefits if started at the age of 62 or 65												
Full retirement benefits for spouse is 50 percent of the applicant's benefits												

Appendix B

Table A2- Social Security Benefits Table (For persons born before 1942 and earlier)												
	Year	FRA[1]	Year	FRA[1]	Year	FRA[1]	Year	FRA[1]	Year	FRA[1]	Year	FRA[1]
	1937	65	1938	65+2 m	1939	65+4 m	1940	65+6 m	1941	65+8 m	1942	65+10 m
	% benefit[2]		% benefit[2]		% benefit[2]		% benefit[2]		% benefit[2]		% benefit[2]	
Item a	Item b	Item c	Item b	Item c	Item b	Item c	Item b	Item c	Item b	Item c	Item b	Item c
62	80.00 %	37.50 %	79.20 %	37.10 %	78.30 %	36.70 %	77.50 %	36.30 %	76.70 %	35.80 %	75.80 %	35.40 %
62 + 1 month	80.6	37.8	79.6	37.3	78.8	36.9	77.9	36.5	77.1	36	76.3	35.6
62 + 2 months	81.1	38.2	80	37.5	79.2	37.1	78.3	36.7	77.5	36.3	76.7	35.8
62 + 3 months	81.7	38.5	80.6	37.8	79.6	37.3	78.8	36.9	77.9	36.5	77.1	36
62 + 4 months	82.2	38.9	81.1	38.2	80	37.5	79.2	37.1	78.3	36.7	77.5	36.3
62 +5 months	82.8	39.2	81.7	38.5	80.6	37.8	79.6	37.3	78.8	36.9	77.9	36.5
62 + 6 months	83.3	39.6	82.2	38.9	81.1	38.2	80	37.5	79.2	37.1	78.3	36.7
62 + 7 months	83.9	39.9	82.8	39.2	81.7	38.5	80.6	37.8	79.6	37.3	78.8	36.9
62 + 8 months	84.4	40.3	83.3	39.6	82.2	38.9	81.1	38.2	80	37.5	79.2	37.1
62 + 9 months	85	40.6	83.9	39.9	82.8	39.2	81.7	38.5	80.6	37.8	79.6	37.3
62 + 10 months	85.6	41	84.4	40.3	83.3	39.6	82.2	38.9	81.1	38.2	80	37.5
62 + 11 months	86.1	41.3	85	40.6	83.9	39.9	82.8	39.2	81.7	38.5	80.6	37.8
63	86.7	41.7	85.6	41	84.4	40.3	83.3	39.6	82.2	38.9	81.1	38.2
63 + 1 month	87.2	42	86.1	41.3	85	40.6	83.9	39.9	82.8	39.2	81.7	38.5
63 + 2 months	87.8	42.4	86.7	41.7	85.6	41	84.4	40.3	83.3	39.6	82.2	38.9

63 + 3 months	88.3	42.7	87.2	42	86.1	41.3	85	40.6	83.9	39.9	82.8	39.2
63 + 4 months	88.9	43.1	87.8	42.4	86.7	41.7	85.6	41	84.4	40.3	83.3	39.6
63 + 5 months	89.4	43.4	88.3	42.7	87.2	42	86.1	41.3	85	40.6	83.9	39.9
63 + 6 months	90	43.8	88.9	43.1	87.8	42.4	86.7	41.7	85.6	41	84.4	40.3
63 + 7 months	90.6	44.1	89.4	43.4	88.3	42.7	87.2	42	86.1	41.3	85	40.6
63 + 8 months	91.1	44.4	90	43.8	88.9	43.1	87.8	42.4	86.7	41.7	85.6	41
63 + 9 months	91.7	44.8	90.6	44.1	89.4	43.4	88.3	42.7	87.2	42	86.1	41.3
63 + 10 months	92.2	45.1	91.1	44.4	90	43.8	88.9	43.1	87.8	42.4	86.7	41.7
63 + 11 months	92.8	45.5	91.7	44.8	90.6	44.1	89.4	43.4	88.3	42.7	87.2	42
64	93.3	45.8	92.2	45.1	91.1	44.4	90	43.8	88.9	43.1	87.8	42.4
64 + 1 month	93.9	46.2	92.8	45.5	91.7	44.8	90.6	44.1	89.4	43.4	88.3	42.7
64 + 2 months	94.4	46.5	93.3	45.8	92.2	45.1	91.1	44.4	90	43.8	88.9	43.1
64 + 3 months	95	46.9	93.9	46.2	92.8	45.5	91.7	44.8	90.6	44.1	89.4	43.4
64 + 4 months	95.6	47.2	94.4	46.5	93.3	45.8	92.2	45.1	91.1	44.4	90	43.8
64 + 5 months	96.1	47.6	95	46.9	93.9	46.2	92.8	45.5	91.7	44.8	90.6	44.1
64 + 6 months	96.7	47.9	95.6	47.2	94.4	46.5	93.3	45.8	92.2	45.1	91.1	44.4
64 + 7 months	97.2	48.3	96.1	47.6	95	46.9	93.9	46.2	92.8	45.5	91.7	44.8
64 + 8 months	97.8	48.6	96.7	47.9	95.6	47.2	94.4	46.5	93.3	45.8	92.2	45.1
64 + 9 months	98.3	49	97.2	48.3	96.1	47.6	95	46.9	93.9	46.2	92.8	45.5
64 + 10 months	98.9	49.3	97.8	48.6	96.7	47.9	95.6	47.2	94.4	46.5	93.3	45.8
64 + 11 months	99.4	49.7	98.3	49	97.2	48.3	96.1	47.6	95	46.9	93.9	46.2
65	100	50	98.9	49.3	97.8	48.6	96.7	47.9	95.6	47.2	94.4	46.5
65 + 1 month			99.4	49.7	98.3	49	97.2	48.3	96.1	47.6	95	46.9
65 + 2 months			100	50	98.9	49.3	97.8	48.6	96.7	47.9	95.6	47.2
65 + 3 months					99.4	49.7	98.3	49	97.2	48.3	96.1	47.6
65 + 4 months					100	50	98.9	49.3	97.8	48.6	96.7	47.9

65 + 5 months							99.4	49.7	98.3	49	97.2	48.3
65 + 6 months							100	50	98.9	49.3	97.8	48.6
65 + 7 months									99.4	49.7	98.3	49
65 + 8 months									100	50	98.9	49.3
65 + 9 months											99.4	49.7
65 + 10 months											100	50
Footnotes to Table A1 and A2 are same												