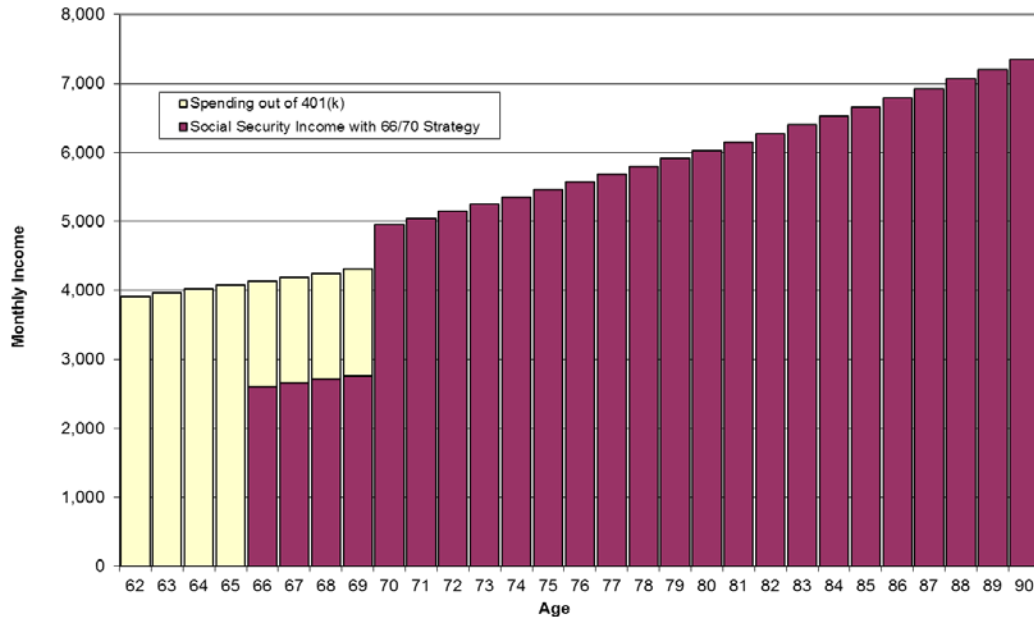


Efficient Retirement Design:

Combining Private Assets and Social Security to
Maximize Retirement Resources

Couple's Income with 66/70 Strategy



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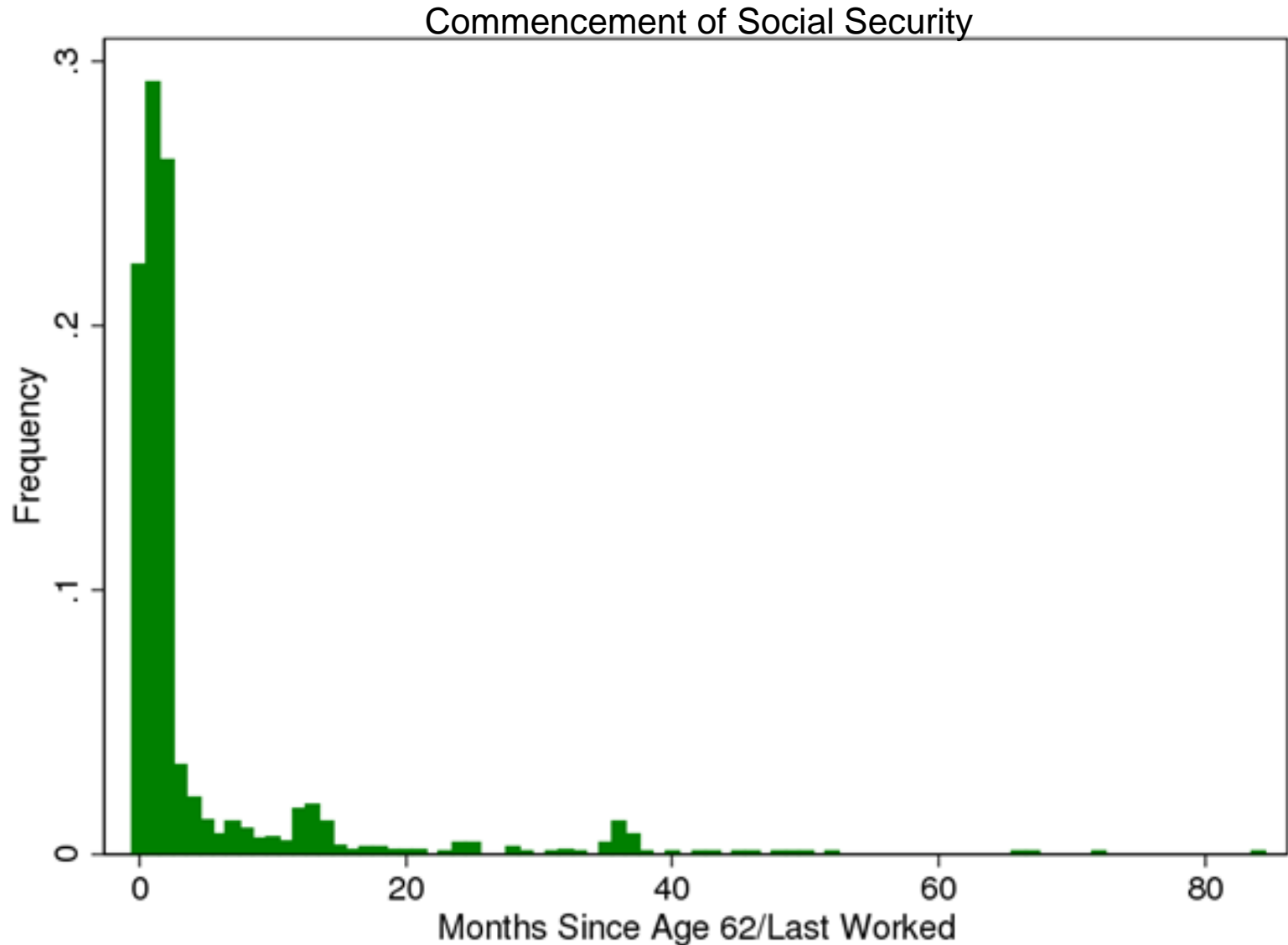
Research Supported by Social Security and the Sloan Foundation

Changing Private Pension System

- Massive switch from Defined Benefit (DB) to Defined Contribution (DC) pensions
- Economics research has focused on the accumulation phase of DC plans with topics such as:
 - Automatic enrollment
 - Employer matching
 - Hardship withdrawals

What is the Prevalent Retirement Design?

Answer = Start Social Security Almost Immediately



What Could People Do?

- Separate retirement and Social Security commencement decisions
- Social Security benefits are increased (actuarially adjusted) for later commencement
- DC assets could be used to finance deferral rather than to supplement Social Security benefits

The Actuarial Adjustments for Delaying Social Security Commencement

% Change in Monthly Benefit

Defer to

70	76.00	65.00	52.31	41.43	32.00	22.22	13.79	6.45
69	65.33	55.00	43.08	32.86	24.00	14.81	6.90	
68	54.67	45.00	33.85	24.29	16.00	7.41		
67	44.00	35.00	24.62	15.71	8.00			
66	33.33	25.00	15.38	7.14				
65	24.44	16.67	7.69					
64	15.56	8.33						
63	6.67							
	62	63	64	65	66	67	68	69

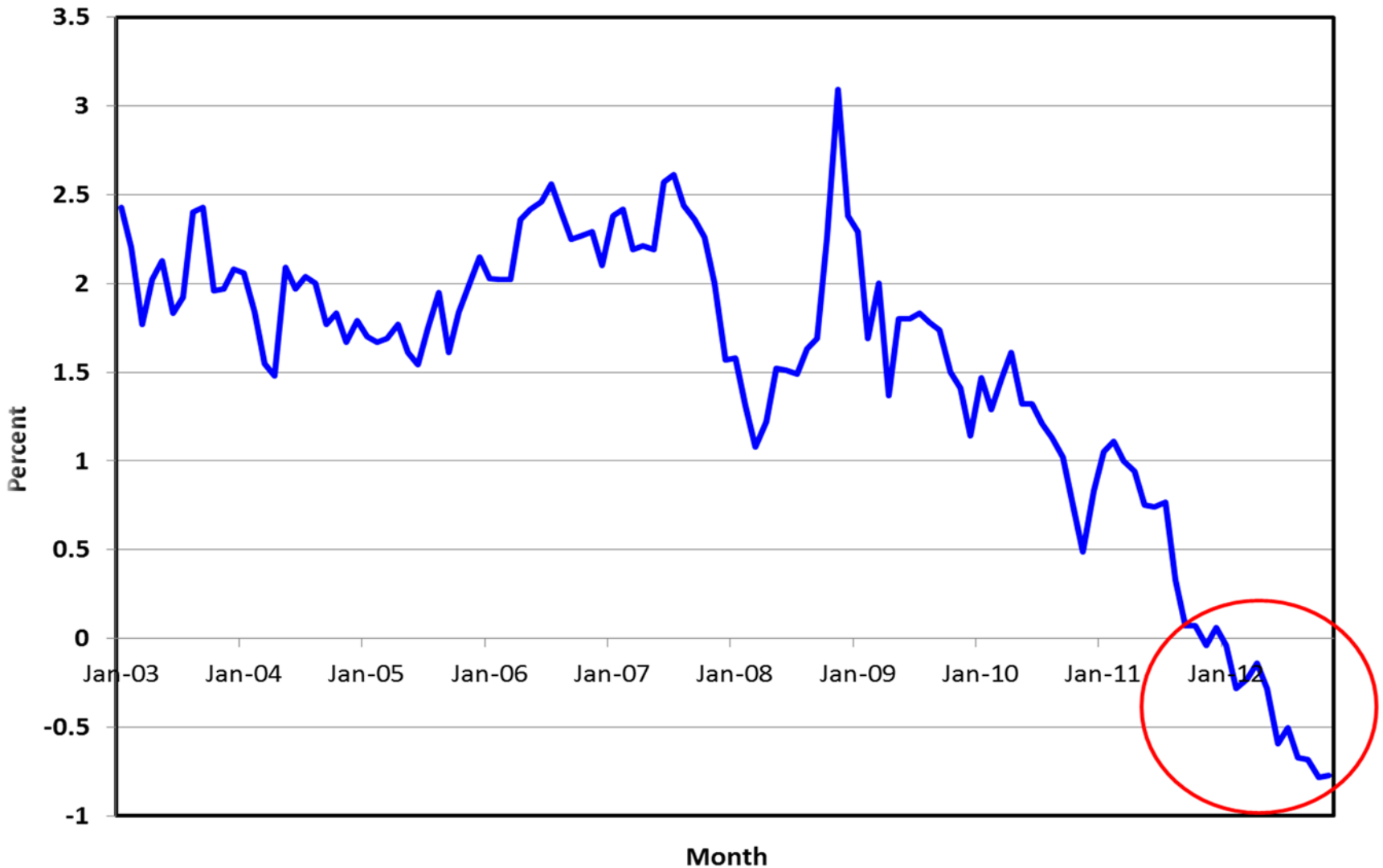
Defer From

Value of an Annuity Importantly Depends on Life Expectancy and Interest Rates

- RLE of 65-year old men is up by 41.45% since 1961.
- The “deal” for deferring commencement has roughly remained the same or improved over the last 50 years (5/9ths of 1%/month)
- Real interest rates are at all time lows

Correct Discount Rate for Inflation-Indexed Payments = Real Interest Rate

Ten-Year TIPS Interest Rates, 2003-2012



Life Expectancy of People in Their 60s Today

	Men	Women
62	21.3	23.6
63	20.5	22.8
64	19.8	22.0
65	19.1	21.1
66	18.3	20.3
67	17.6	19.5
68	16.9	18.8
69	16.2	18.0
70	15.5	17.2

Cohort Remaining Life Expectancies for people born 1/1/51

Life Expectancies for Couples

Husband	Wife	Yrs to 1 st Death	Yrs to 2 nd Death	Length of Widowhood
62	60	17.5	29.2	11.7
63	61	16.7	28.2	11.5
64	62	16.0	27.2	11.2
65	63	15.3	26.3	11.0
66	64	14.6	25.3	10.8
67	65	13.8	24.4	10.5
68	66	13.1	23.4	10.3
69	67	12.5	22.5	10.0
70	68	11.8	21.6	9.8

Based on Social Security Cohort Life Tables

Result: Deferring Social Security is Actuarially Advantageous

- Deferring = good deal for single men in average health
- Deferring = better deal for single women in average health
- Deferring = so-so deal for the lower earner in a couple
- Deferring = very good deal for the higher earner in a couple

Why the Difference for the Higher and Lower Earner?

- Survivor (widow) benefits are based on the higher of the two individual benefit amounts
- Higher earner's benefits are paid out as a second-to-die annuity (for 22 to 25 years)
- Lower earner's benefits are paid out as a first-to-die annuity (12 to 15 years)

The Suggested Strategy

- Single men in average health should defer to 68 to 70. Those in better than average health should defer to 70
- Single women in average health should defer to 70
- Higher earner in a couple should defer to 70 unless both spouses are in significantly below average health
- Lower earner could defer if Social Security money is not needed, but there is not much gain in it

An Unbelievably Good Deal: Getting Paid By Social Security While Deferring

- If higher earner defers to 70, he can collect spousal benefits at 66 and still defer own-record benefits
- Collecting spousal benefits after the NRA is almost always part of an efficient retirement design for couples
- Some single individuals can collect spousal benefits on an ex-spouse (either via divorce or death) and still benefit from deferring own-record benefits

What is the Potential Gain?

Optimal Claiming vs. Immediate Claiming at 62 with 0% Real Interest Rate

	AIME=3,476	AIME = Max
Single Man, Average Health	39,508	62,435
Single Man, Good Health	63,608	100,520
Single Woman, Average Health	60,232	95,185
Single Woman, Good Health	85,471	135,070
Two-Earner Couple, Lower PIA is 75%, Average Health	127,839	202,026
Two-Earner Couple, Lower PIA is 75%, Both in Good Health	171,730	271,282

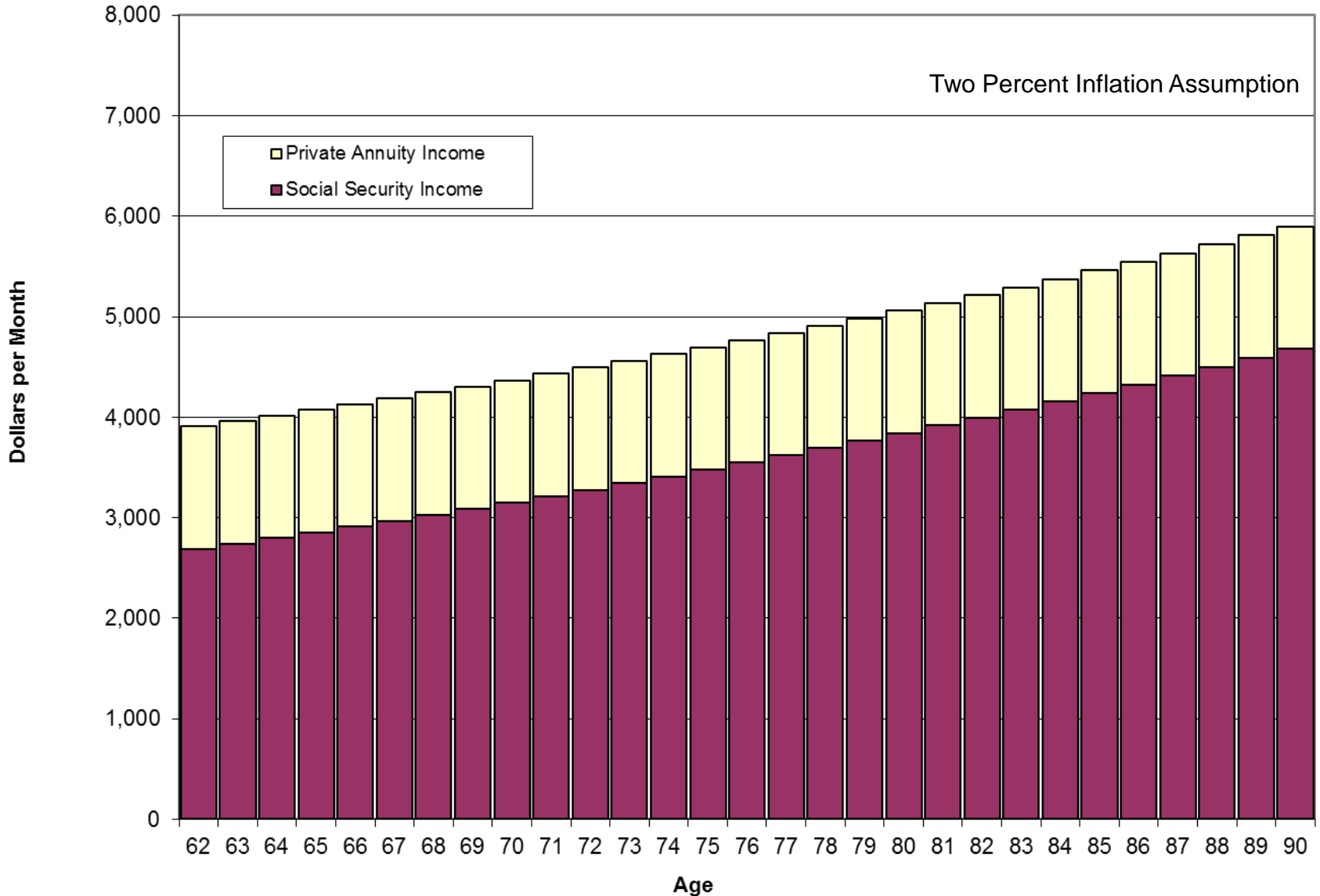
Deferring Social Security Benefits Even After Having Started Them

- Once 66, people can temporarily halt benefits and resume them later with higher monthly benefits.
- Consider someone collecting \$2,000/month at 66. If they halt benefits for a year, their benefits would be \$2,160 plus an inflation adjustment when they resume. This is better than market interest rates.
- The expected duration of the extra real \$160/month is 17.6 years for single men, 19.5 years for single women and 24.4 years for primary earners.

Case Study of Two-Earner Couple

- Husband and wife are both 62, in average health, and are retiring
- Husband's AIME is \$4,768. PIA calculates to \$1,984
- Wife's AIME is \$3,576 and her PIA is \$1,603
- Combined 401(k) Assets are \$257,000
- Parallel Strategy: Start Social Security at 62 and buy annuity with 401(k) funds
- Optimal Series Strategy: Finance 66/70 deferral with 401(k) funds

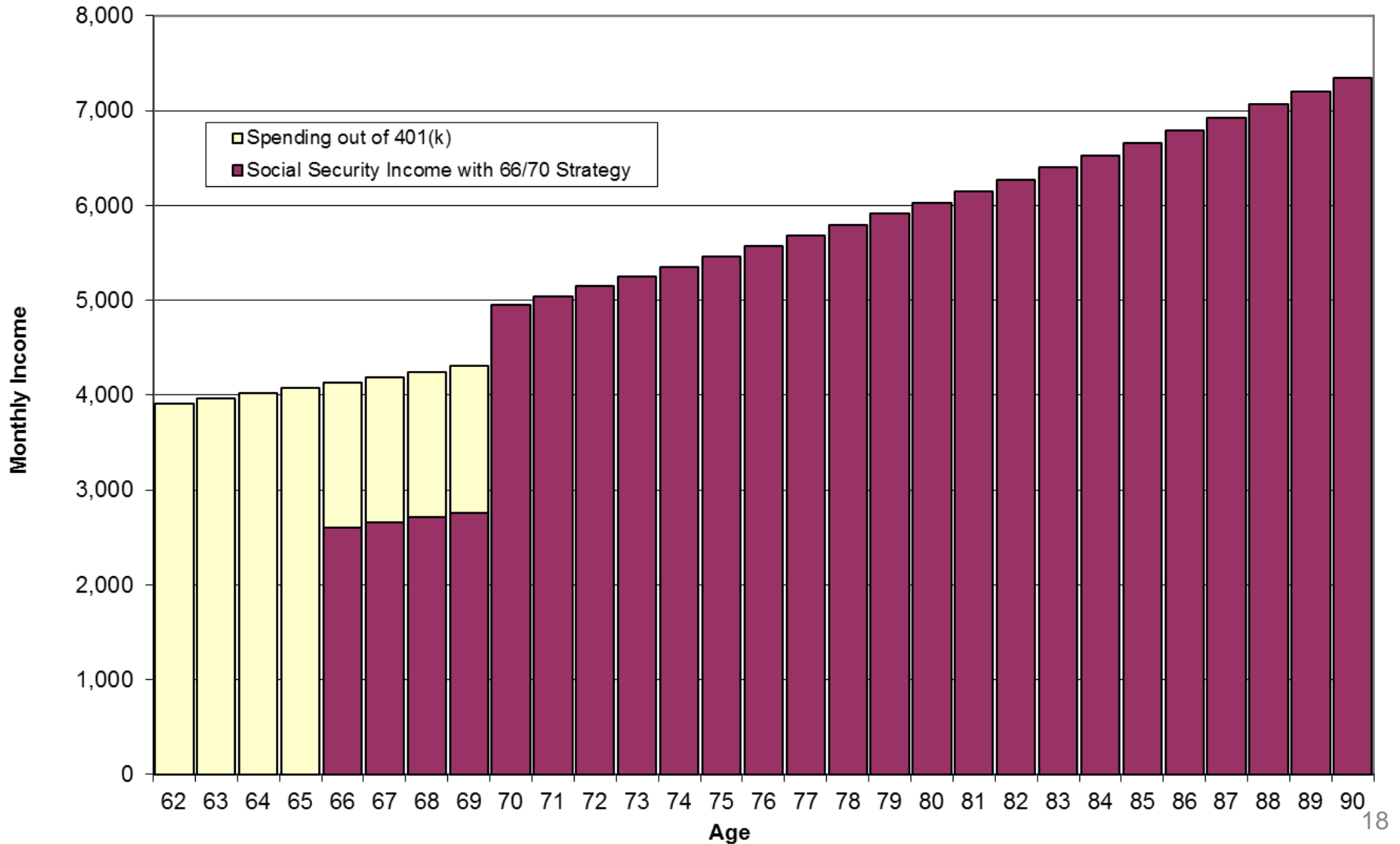
Couple's Income with Immediate Commencement and Annuity Purchase



Couple's Income with Efficient Retirement Design

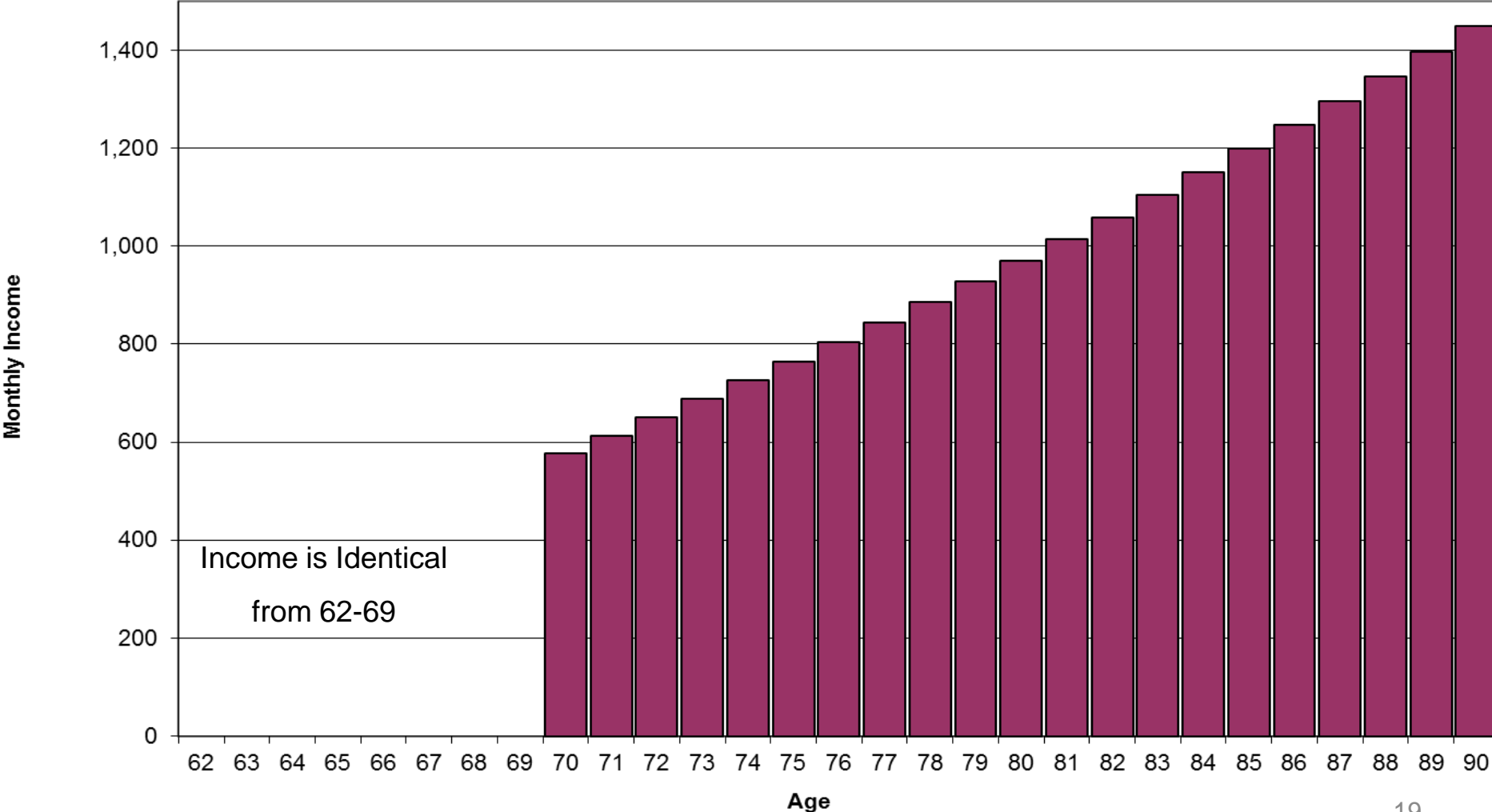
Couple's Income with 66/70 Strategy

Efficient Retirement Design Has Wife Starting Benefits at 66, Husband Collecting Spousal Benefits at 66 and Own Benefits at 70



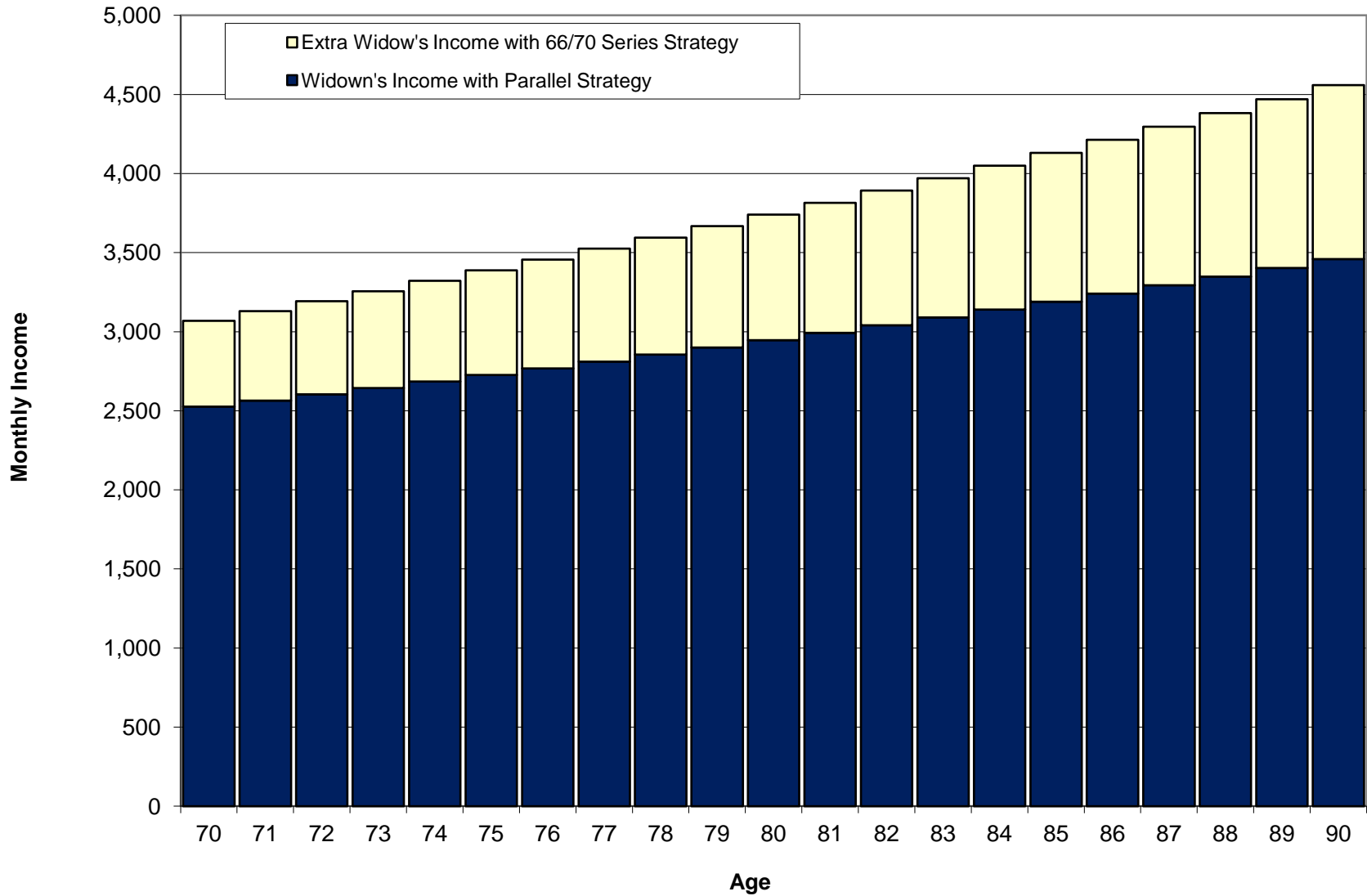
Difference in Income at 70 and Beyond

Difference in Couple's Income



Big Advantage of ERD: Widow's Benefits

Survivor's Income with Each Strategy



Add It Up

- Couple Has Same Income from 62-69
- \$579 - \$1,450 more per month from 70 onwards
- Survivor (Widow) Enjoys 21-32% more income
- Children may benefit since likelihood of a dependent widow is reduced
- 66/70 Strategy dominates 62/62 strategy

Who Should Defer Social Security?

At current real interest rates, almost everybody!

Optimal commencement age shown in parenthesis

- Single black male with less than high school education (68)
- Single male in poor health (2X mortality) (65)
- Single woman in average health (70)
- Single woman in poor health (2X mortality) (68)
- For couples, almost all primary earners should defer to 70
- Most non-earners in one-earner households (66)
- Secondary earners in two-earner households (varies from 62 to 70 depending on race, education and health)

Two Ways To Defer Social Security

- Work Longer!
- Use private assets such as 401(k) accounts to finance deferral