WHAT'S MY NUMBER?

How can I best plan to save for retirement?

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QUALITY INVESTING

THE HAVERFORD TRUST COMPANY

“ The best time to plant a tree was 10 years ago. The second best time is today. ”

Ancient Chinese Proverb

Questions for Getting Started

- How much do I need to retire?
- How do I get to my ideal retirement number?
- How do I make it last my lifetime?

How Much Do You Need to Retire?

Recent surveys indicate most people desire

70% to 80%

of their pre-retirement income to maintain their lifestyle.

Wall Street Journal –
https://www.wsj.com/articles/beyond-the-70-80-rule-how-much-do-you-really-need-in-retirement-1521732162

Where to Begin

How do I get to my number and how do I make it last?

- Seek a professional
- Gather your data
- Organize and analyze
- Know your goals and build the plan
- Execute the plan and monitor/update regularly

So How Do I Calculate My Number?

Denise

ASSUMPTIONS

- 40 years old
- 25 years to retirement
- $100,000 annual salary
- 100% of current income needed in retirement

Let’s calculate: Step 1

Estimate Denise’s salary last year.

1. **$100,000**

Multiply it by the inflation factor below, which correlates to the number of years Denise has until her desired retirement.

Years to Retirement	Inflation
5	**1.16**
10	**1.34**
15	**1.56**
20	**1.81**
25	**2.09**
30	**2.43**
35	**2.81**
40	**3.26**

Source: Standard & Poor’s Financial Communications

X

2. **2.09**

=

This represents the future value of Denise’s salary.
(assuming 3% inflation)

3. **$ 209,000**

Projections and estimates are hypothetical in nature, do not reflect actual investment returns or information, and are not guarantees of future results.

Let's calculate: Step 2

Future value of Denise's salary (from Step 1). — 3. **$209,000**

x

Multiply it by the percentage of current income Denise expects to need in retirement (typically between 70-80%). — 4. **100 %**

=

Estimated value of annual income Denise needs in retirement. — **$ 209,000**

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Let's calculate: Step 3

Approximately how much will Social Security cover?

Years to Retirement

Current Salary	40	35	30	25	20	15	10	5
$20,000	29,500	27,000	25,000	22,500	22,500	19,000	17,500	16,000
$30,000	32,500	30,000	27,500	25,000	22,500	21,000	19,000	17,500
$40,000	35,500	32,500	30,000	27,000	25,000	23,000	21,000	19,000
$50,000	38,500	35,500	32,500	29,500	27,000	25,000	22,500	21,000
$60,000	41,500	38,000	35,000	32,000	29,000	26,500	24,500	22,500
$70,000	44,500	41,000	37,500	34,000	31,000	28,500	26,000	24,000
$80,000	47,500	43,500	40,000	36,500	33,500	30,500	28,000	25,500
$90,000	50,500	46,500	42,500	39,000	35,500	32,500	29,500	27,500
$97,500 +	53,000	48,500	44,500	40,500	37,000	34,000	31,000	28,500

Source: Standard & Poor's Financial Communications

Assumes 3% annual inflation and a 5% annual return.

Denise's Social Security income. -- 5. **$40,500**

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Let's calculate: Step 4

Subtract estimated Social Security benefit from the annual amount calculated in Step 2.

Estimated value of annual income Denise needs in retirement.	4.	**$209,000**
	-	
Subtract estimated Social Security income.	5.	**$40,500**
	=	
How much of Denise's savings will she have to use each year in retirement? (assuming no other sources of income other than Social Security)	6.	**$168,500**

Projections and estimates are hypothetical in nature, do not reflect actual investment returns or information, and are not guarantees of future results.

Let's calculate: Step 5

How much does Denise need in savings to have enough for her retirement?
(assuming retirement age of 65)

Savings needed each year in retirement.	6.	**$168,500**
		x
x multiply*	7.	**16.7**
		=
Estimated total amount Denise will need to have put aside at age 65 in retirement accounts and personal savings.		**$ 2,813,950**

* This multiplier represents how much savings you would need in retirement to last 20 years at 3% inflation and earning 5% annual return.

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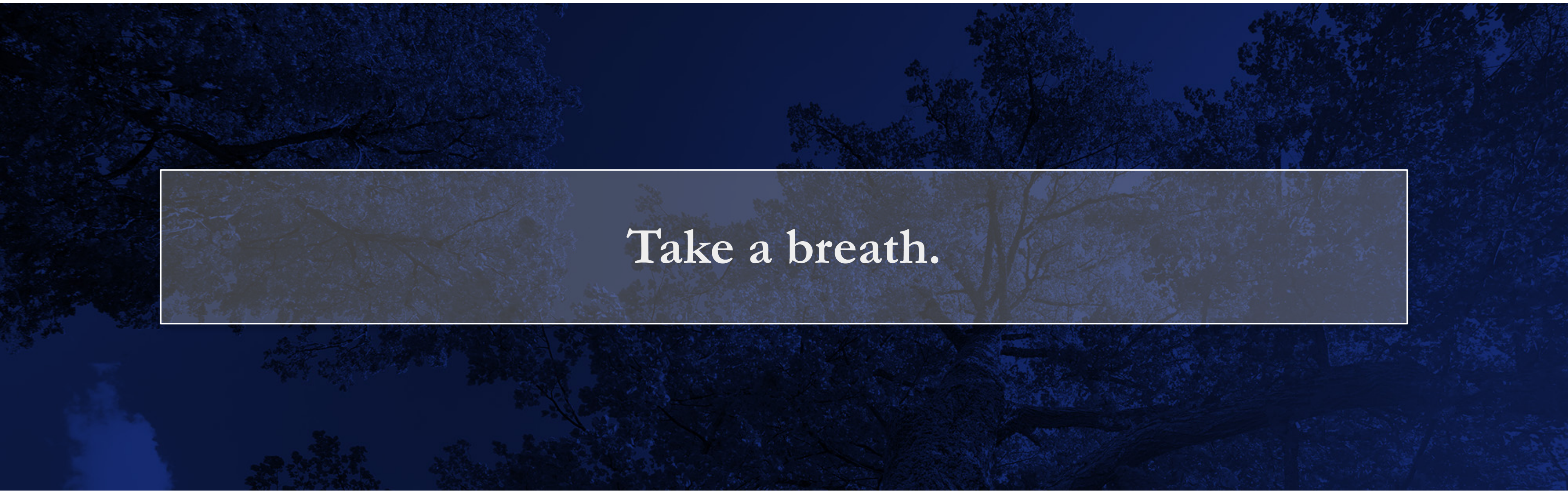

Take a breath.

Retirement Variables

- Life Expectancy
- Inflation

✓ Things you can plan for

- Time *to* and time *in* retirement
- Lifestyle
- Debt
- Income Sources
- Investment Choices

✓ Things you can control

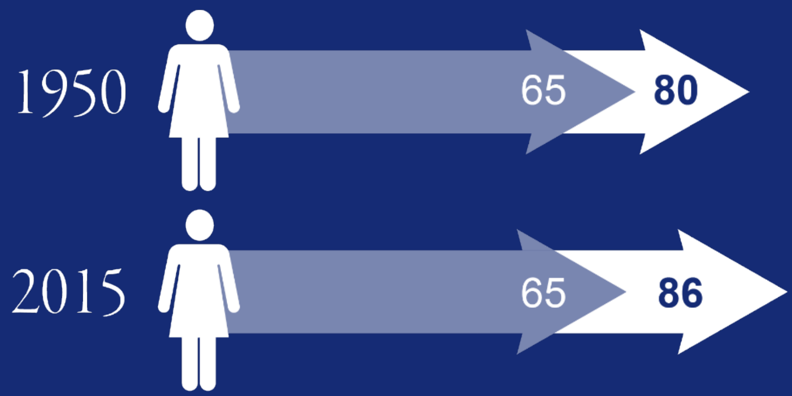
Things You Can Plan For

Retirement Variables

✓ Life Expectancy

- Inflation
- Time *to* and time *in* retirement
- Lifestyle
- Debt
- Income Sources
- Investment Choices

Life Expectancy



Female children born in 1950 have a life expectancy of around 80 years, if they reach age 65.

Female children born in 2015 have a life expectancy of around 86 years, if they reach age 65.

Centers for Disease Control and Prevention -
https://www.cdc.gov/nchs/data/hus/2016/015.pdf

Retirement Variables

- ✓ Life Expectancy
- ✓ **Inflation**
- Time *to* and time *in* retirement
- Lifestyle
- Debt
- Income Sources
- Investment Choices

Impact of Inflation

The cost of most items increases year after year.

Even in the low inflationary environment of the past 10 years, **$100** in 2008 only buys you **$85** worth of goods or services today.

U.S. average CPI -
https://www.inflation.eu/inflation-rates/united-states/historic-inflation/cpi-inflation-united-states.aspx

Things You Can Control

Retirement Variables

- ✓ Life Expectancy
- ✓ Inflation
- ✓ **Time *to* and time *in* retirement**
- Lifestyle
- Debt
- Income Sources
- Investment Choices

How Long Will You Be Retired?

If you retire at age 65 and your life expectancy is to age 85, you will have…

20

Years in retirement
on average

Retirement Variables

- ✓ Life Expectancy
- ✓ Inflation
- ✓ Time *in* and time *to* retirement
- ✓ **Lifestyle**
- Debt
- Income Sources
- Investment Choices

Your Retirement Lifestyle

Will you be spending more or less money when you retire?

Some people may spend more (initially) upon retirement.

- Travel
- More spare time to spend
- Healthcare costs
  - Paying healthcare premiums
  - Greater medical needs
  - Rising healthcare costs

Retirement Variables

- ✓ Life Expectancy
- ✓ Inflation
- ✓ Time *in* and time *to* retirement
- ✓ Lifestyle
- ✓ **Debt**
- Income Sources
- Investment Choices

How Prevalent is Debt in Retirement?

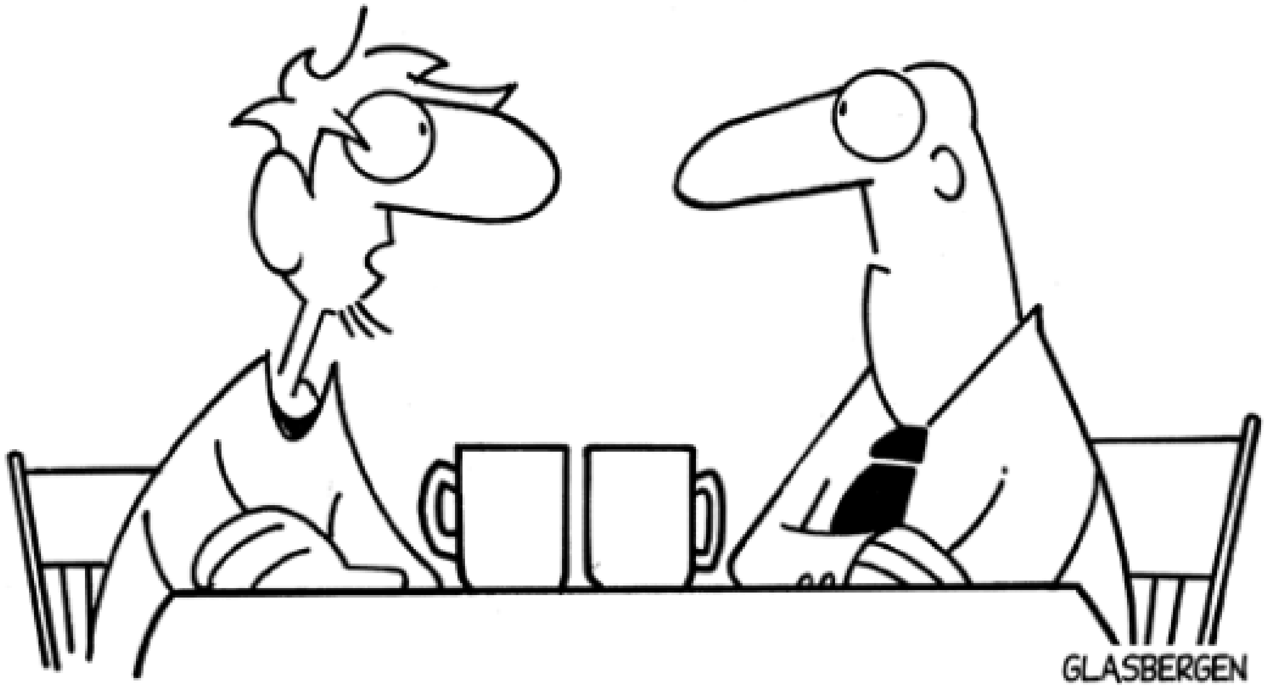
U.S. household debt went up six-fold from 2011 to 2016.[1]

- **39% of 65- to 74-year-olds hold mortgage debt.[1]** That's double the rate of those in 1992, meaning more retirees are violating the golden rule of paying off mortgage debt by retirement.

Student loan debt has become senior debt.

- Student debt held by people age 60 & over has increased state by state since 2012. **In 6 states, the rate more than doubled.[2]**
- **Nearly 80% of parents give financial support to adult children,** to the tune of $500 billion a year or two times what parents put into retirement accounts.[3]
- **A larger share of 25 to 35 year olds are moving back in with parents than in past generations [4]**

[1]According to EBRI employee Benefit Research Institute.
[2]According to Barron's.
[3]According to 2018 Bank of America, ML and Age Wave survey
4 According to Pew Research Report



"All of my professors told us the key to success is doing something you love. I love living at home with you and mom."

Debt Reduction Strategies

1. Understand what you owe.

2. Analyze your spending.
   Work on the behaviors that got you into debt and don't take on more debt.

Other Debt Reduction Ideas

- Make half mortgage payments every two weeks as opposed to once a month.
- Tax refund? Bonus? Apply to mortgage principal.
- Reduce expenses: Do you still need two cars? Negotiate internet and cell phone and satellite radio subscriptions. Don't auto renew.
- Review your insurance needs. Still need life insurance? Increase deductibles on auto and homeowners? Talk to an insurance professional.
- Set boundaries with adult children.

Retirement Variables

- ✓ Life Expectancy
- ✓ Inflation
- ✓ Time *in* and time *to* retirement
- ✓ Lifestyle
- ✓ Debt
- ✓ **Income Sources**
- Investment Choices

Retirement Income Sources

Where could the retirement income come from?

- **Income from Retirement Accounts**
  - Mandatory distributions age 70.5
- **Pensions**
  - Lump sum payout and/or monthly annuity payments
- **Securities Portfolio Investment Incomes**
- **Social Security Benefits** for those who meet qualifications

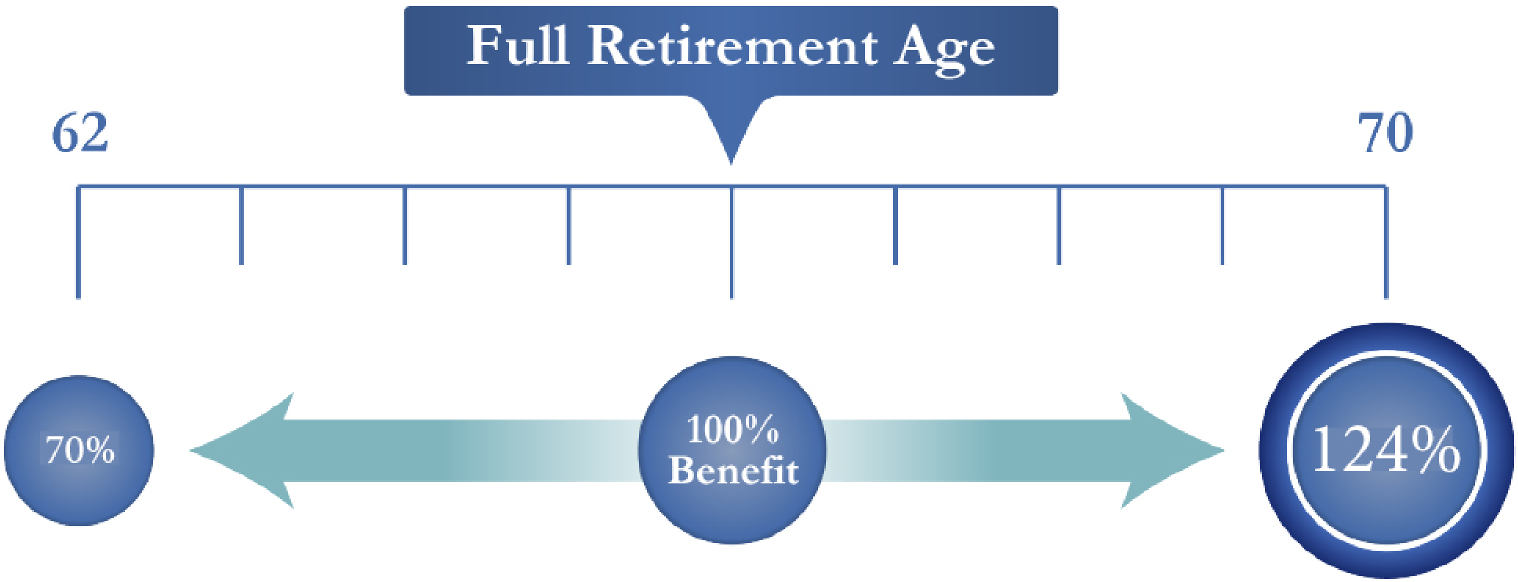
Managing retirement income starts with knowing what your sources of income will be—from Social Security to an employer-sponsored retirement savings account like a 401(k)—and the rules that govern each income source. What is listed here should not be considered all-inclusive. Please consult a financial professional to discuss your situation.

Social Security

When do
you take it?

Delay it as long
as you can.

Social Security Benefits Change Based on the Age you Elect

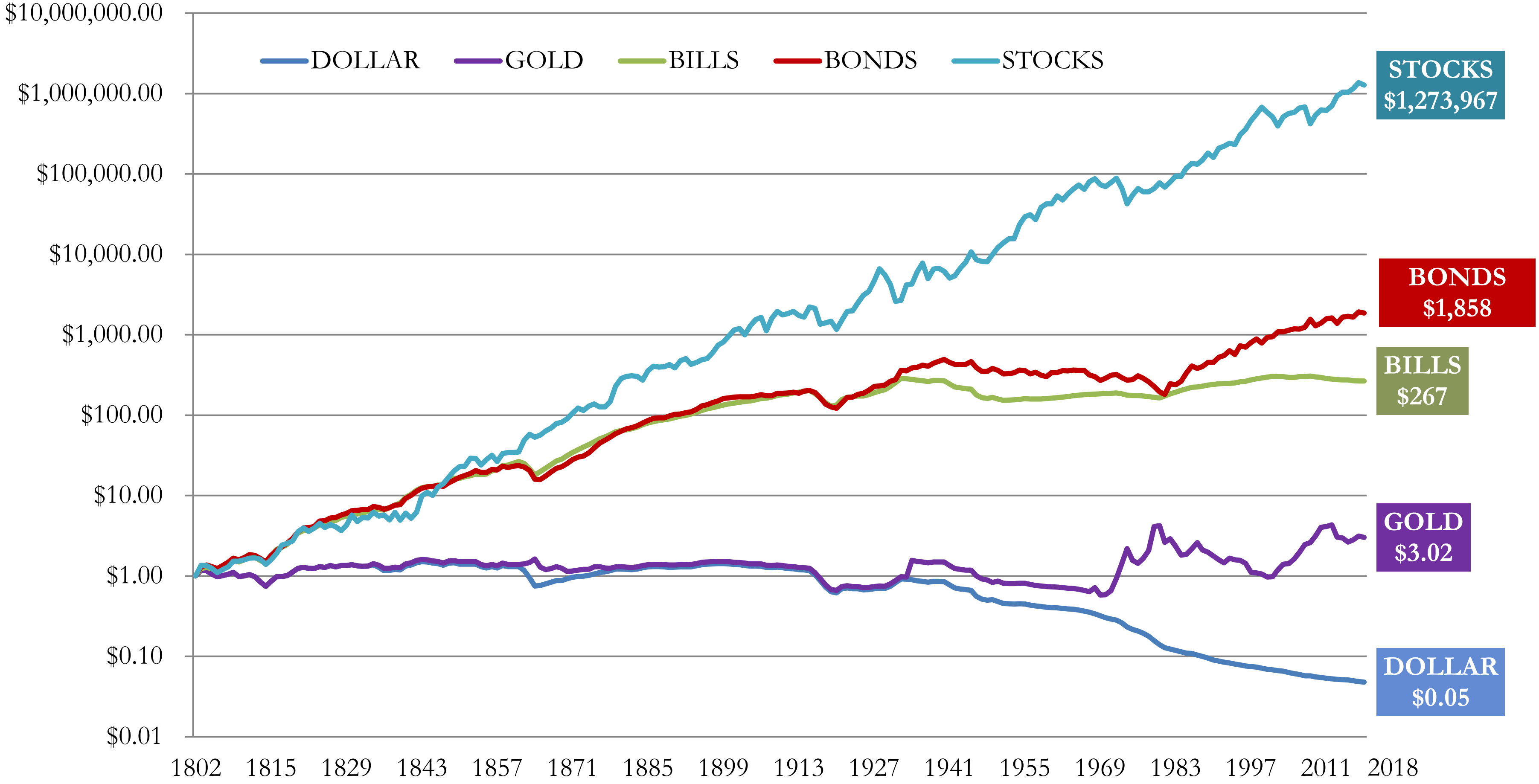


100% at age 67 if you were born in 1960 or later. Data as of 9/9/2019.
Social Security Administration - www.ssa.gov/planners/retire/delayret.html

Retirement Variables

- ✓ Life Expectancy
- ✓ Inflation
- ✓ Time *in* and time *to* retirement
- ✓ Lifestyle
- ✓ Debt
- ✓ Income Sources
- ✓ **Investment Choices**

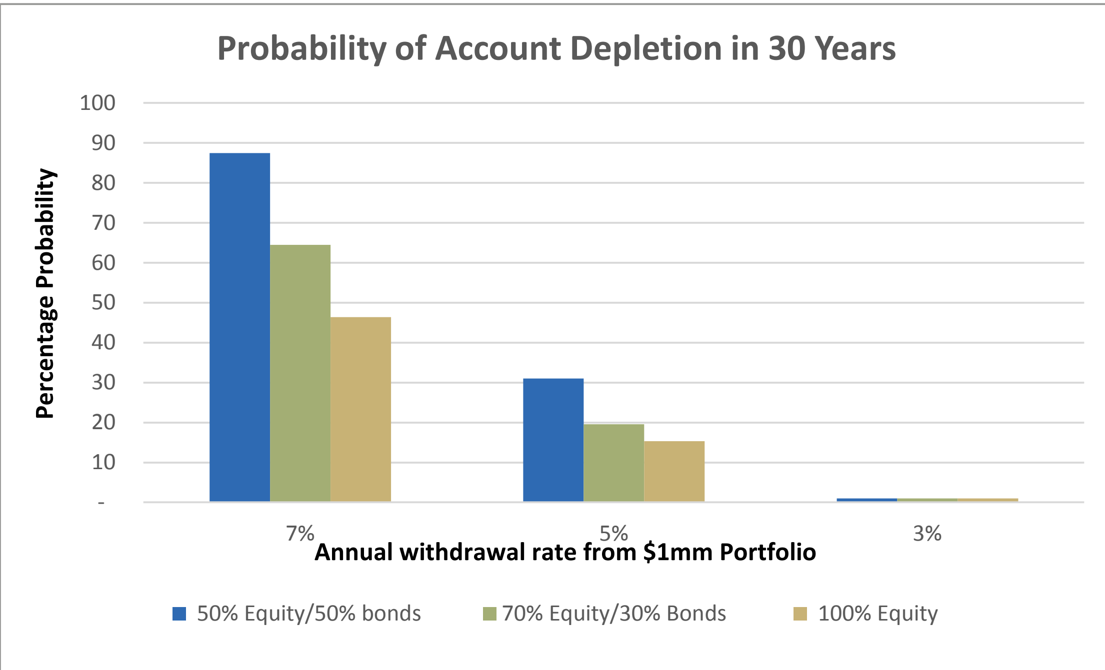
Growth of $1 After Inflation



Stocks: Inflation adjusted total stock market returns, 1802-1871 from G. William Schwert, "Indexes of United States Stocks Prices from 1802 to 1987", 1871-1962 from Cowles indexes as reprinted in Robert Shiller, Market Volatility, 1962-2018 taken from CRSP Total Market Index. Bonds: Long-term after-inflation bond Index 1802-2011, Inflation Adjusted Bloomberg Barclays Long-Term Treasury Index 2012-2018. T-Bills: Inflation Adjusted 90-Day Government Bill Rate. Gold: Inflation Adjusted Index of Real Gold Prices. Inflation: U.S. Consumer Price Index. Indexes are shown for illustrative purposes only. It is not possible to invest directly in an index. Source: Copyright © 2012 by JeremySiegel.com Information through 2011 from Jeremysiegel.com. Returns from 2012-2018, Haverford Trust Company, Factset, CRSP, Barclays. Past performance is no guarantee of future results. As of 12/31/2018, OS007

How Do I Make It Last?

INVESTMENT STYLE & WITHDRAWAL FLEXIBILITY



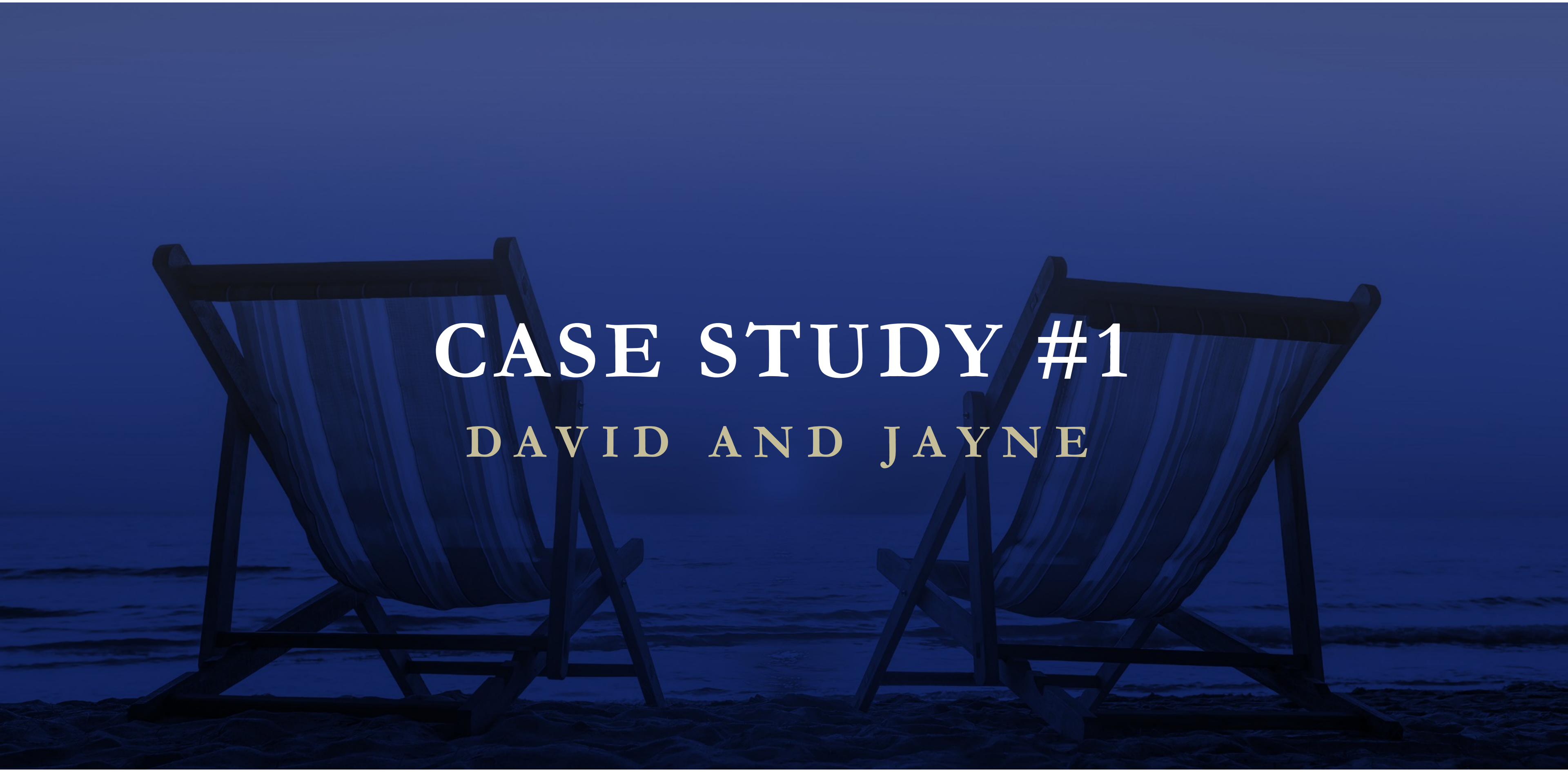
Regardless of investment style, the "sweet spot" is to withdraw between

3-4%

to minimize the chance of outliving your money!

Investment returns (including but not limited to S&P 500 Stock Index and/or U.S. 10-year Government Bond Index historical returns) were run using a traditional Monte Carlo simulator; all withdrawal amounts are adjusted for inflation. The Monte Carlo simulation is a non-linear statistical method that, based on random sampling of historical stock, bond and cash returns, allows for the assignment of probabilities to various outcomes. All values expressed in today's dollars as of 7/30/18.

Applying These Lessons


CASE STUDY #1
DAVID AND JAYNE

Case Study #1

David
45 years old

Jayne
44 years old

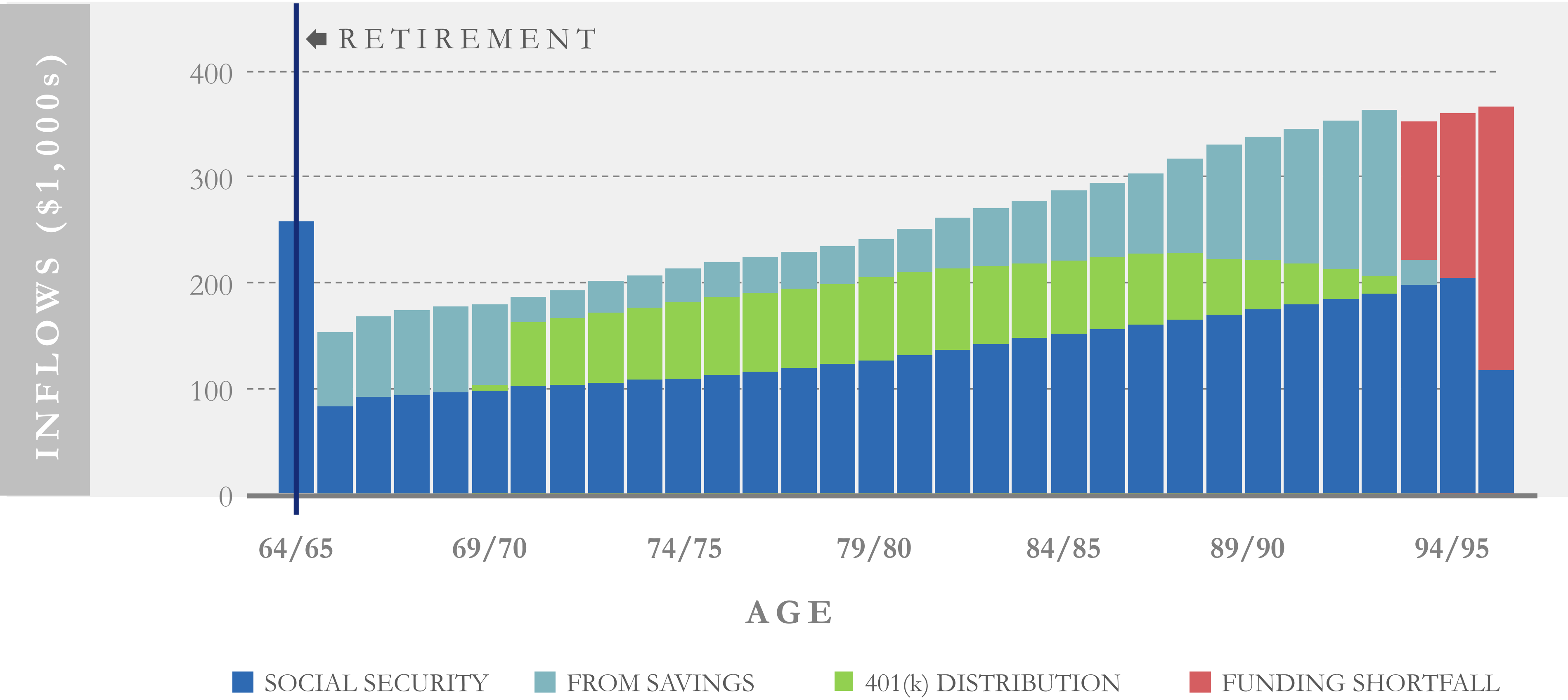
Today, David and Jayne have approximately:

- $400,000 in investment assets
- $200,000 in annual income
- $125,000 in annual expenses

We will assume they both live until age 95.

Can David retire in 20 years and Jayne in 21 years when they turn 65 and still live the lifestyle they currently enjoy?

Income at Retirement



Assuming a life expectancy of age 95

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FUNDING RETIREMENT

CASE STUDY #1

David & Jayne currently have 3 projected unfunded years during retirement which results in a cumulative shortfall of **$462,000**.

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Option #1

SAVE MORE BEFORE YOU RETIRE

Save an additional **$220** per month or **$2,640** per year through 2037

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Option #2

RETIRE LATER

Delaying retirement by **2 years (*David*)** and **1 year (*Jayne*)** will allow more time to save and for their assets to grow

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Option #3

SPEND LESS DURING RETIREMENT

Reduce living expenses by

$3,000

(in today's dollars) per year, every year in retirement

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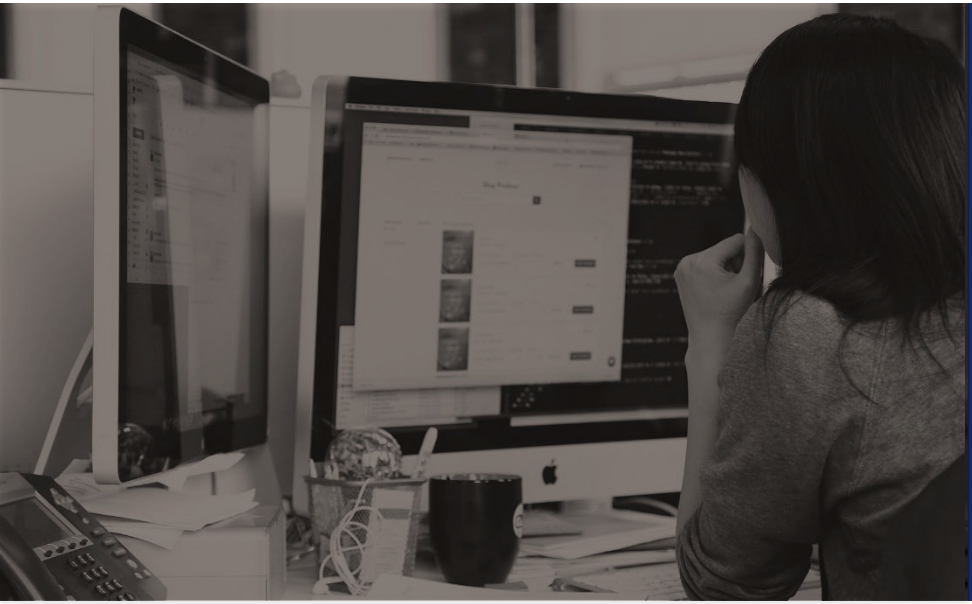
Option #4

WORK PART-TIME



Consider working part-time for additional income

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Recap:

RETIREMENT GOAL

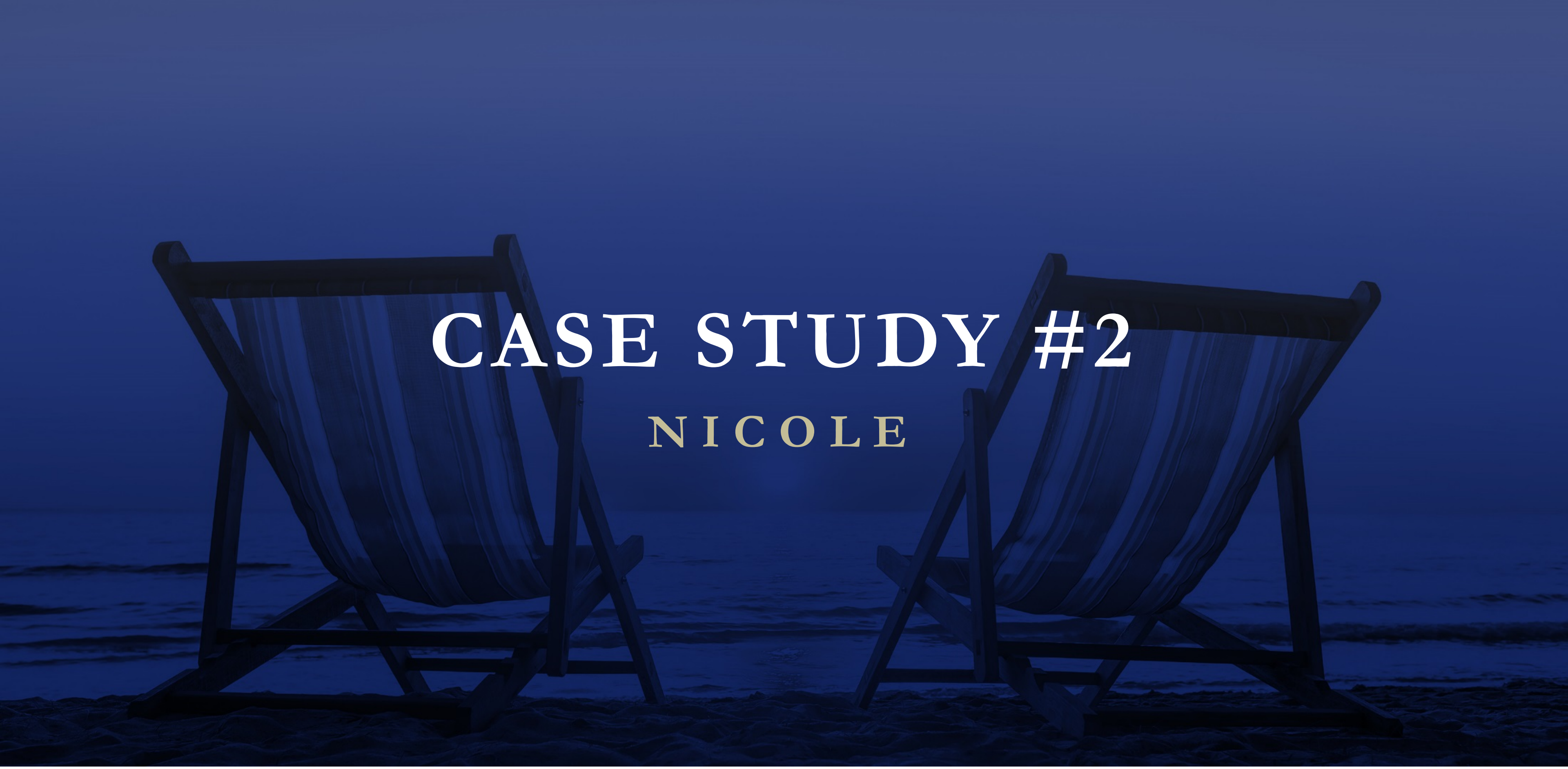
Projected shortfall

$462,000

3 projected unfunded years

OPTIONS

1. Increase savings by **$220** per month through retirement
2. Retire later allowing for more time to save and for assets to grow
3. Reduce overall spending during retirement
4. Work part-time



CASE STUDY #2

NICOLE

Case Study #2

Nicole
60 years old

Today, Nicole has approximately:

- $125,000 in retirement assets
- $70,000 in annual income
- $35,000 in annual expenses
- $10,000 savings per year

We will assume Nicole will live until age 95.

Can Nicole retire early at 65?
Should she wait to retire until she is 67 or 70 years old?

Current Funding

Assuming a life expectancy of age 95

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FUNDING RETIREMENT

CASE STUDY #2

Nicole currently has three projected unfunded years during retirement which results in a cumulative shortfall of **$109,203**.

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Option #1

SAVE MORE BEFORE YOU RETIRE

Save an additional **$750** per month or **$9,000** per year through 2026

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Option #2

RETIRE LATER

Delaying retirement by **3 years** will allow for Social Security to increase, assets to grow, and more contributions

Option #3

WORK PART-TIME

Consider working part-time for additional income

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Recap:

RETIREMENT GOAL

Projected shortfall

$109,203

3 projected unfunded years

OPTIONS

1. Increase savings by **$679** per month through retirement
2. Retire later allowing for more time to save and for assets to grow
3. Work part-time

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So How Can I Best Plan to Save For Retirement?

Key Takeaways

IDENTIFY WAYS YOU CAN TAKE CONTROL

1. Know your number.
2. Engage a financial professional.
3. Invest appropriately.
4. Manage debt & spending.
5. Monitor and adjust.


Take Control!

—CELEBRATING 40 YEARS—

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