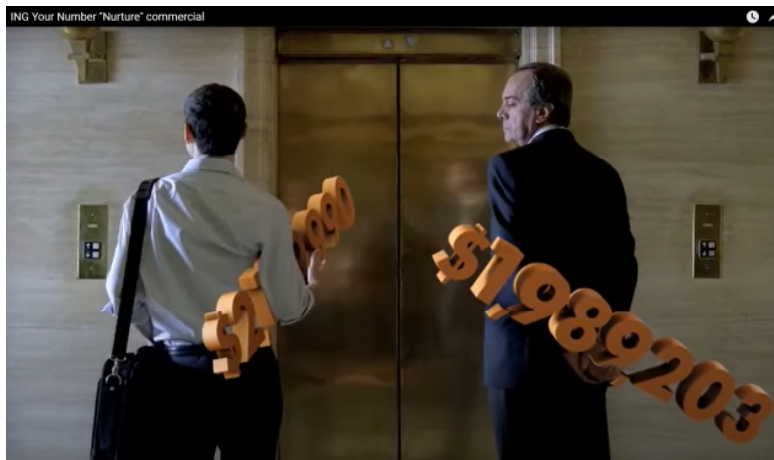


1

Retirement - Just how much do you need?



2

2

# CrystalBall

online

## Ask the Crystal Ball .....

Take a few seconds to think about your question. It must be formulated in such a way that the answer can be **yes or no**.

Your question here



ASK YOUR QUESTION

crystalballonline.com

3

3

## It Doesn't Require Magic

- Retirement calculators create a plan – a financial forecast
  - Based on assumptions, current fact and future projection.
  - Rely on the accuracy and precision of their input
  - Subject to the error and uncertainty of the assumptions, predictions, ... and the tool used to create it.

Some tools are better than others,  
and some are worse.

4

4

“The goal of forecasting is not to predict the future, but to tell you what you need to know to take meaningful action in the present.”

Paul Saffo


Six Rules for Accurate Effective Forecasting  
Harvard Business Review,  
July-August 2007, 122-131

5

5

## Accumulation / Decumulation

### invest verb (1)

 Save Word

invest | \in-'vest|

invested; investing; invests

#### Definition of *invest* (Entry 1 of 2)

*transitive verb*

1 : to commit (money) in order to earn a financial return

2 : to make use of for **future benefits** or advantages  
// *invested* her time wisely

3 : to involve or engage especially emotionally  
// *were deeply invested* in their children's lives

*intransitive verb*

: to make an **investment**

### decumulation noun

 Save Word

de-cumulation | \ 'dē+ \

#### Definition of *decumulation*

: disposal of something accumulated

6

6

## Goals

- Enough money to live comfortably in retirement
- Travel
- Toys
- Gifts
  - Family
  - Charity
  - Legacy



7

7

## How Retirement Calculators Work

- Account for the net accumulation of your assets
  - Income
  - Expenses
  - Gains / Losses
  - Interest / Dividend
  - Taxes
- Predict and project a future value per year
- Caution – Some show future value in current dollars

8

8

## How Retirement Calculators Work (2)

- Combine expected available assets and returns per year and subtract expected expenses, RMD's and taxes to determine sufficiency
- Few account for Order of Withdrawal – Large effect on taxes and residual estate
  - How to withdraw
    - How much
    - In what order
      - Taxable – Regular Investment Accounts
      - Tax Deferred – Retirement Accounts
      - Tax Exempt – Roth

9

9

## Default Order of Withdrawal

- General Rule of Thumb Withdrawal Order
  - Taxable
  - Tax Deferred
  - Tax Exempt
- RMD's - Higher Withdrawals from Tax Deferred Later in Retirement
  - Lower Taxes Early in Retirement
  - Higher Taxes Later in Retirement
  - Higher Total Taxes – Lower Residual Estate\*

\* May depend on your Tax Bracket and amount in your Tax Deferred accounts

10

10

## Modified Order of Withdrawal

- Tax Modified Order of Withdrawal
    - Tax Deferred - To the Limit of Your Tax Bracket
    - Taxable
    - Tax Exempt
  - RMD's – Will be Lower Later in Retirement
    - Higher Taxes Early in Retirement
    - Lower Taxes Later in Retirement
    - Lower Total Taxes – Higher Residual Estate\*
- \* May depend on your Tax Bracket and amount in your Tax Deferred accounts

11

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## Input Data

### Knowns (Controlled)

- Current Age
- Spouse's Age
- Current Income
- Current Savings
- Current Investments
- Current Expenses
- Current Debt
- Current Investment Returns

### Unknowns (Uncontrolled)

- Retirement Age
- Spouses Retirement Age
- Length of Retirement
- Future Marital Status
- Future Health
- Future Expenses
- Future Income
- Future Debt
- Future Investment Returns
- Inflation

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## Unknowns Can Lead to Error

- Retirement Age
- Life Expectancy
- Expenses
- Portfolio Allocation and Size
- Inflation
- Investment Return

13

13

## Complexity

- Income and Expenses change every year
- Value of money changes over time
- No financial outcome or decision stands alone
  - Income affects taxes
  - Taxes affect spending
  - Social Security benefits and retirement accounts affect Taxes
  - Withdrawals affect assets
- All of this happens among the milestones and changes that life brings.

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## Rules for Retirement Calculator Use

- Never Assume Complete Accuracy
- Iterative – Long Term Process
- Small Errors Compound into Big Errors
- Test Multiple and Varied Scenarios
- Use Results as a Guide
- Look for Corroboration

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## Types of Retirement Calculators

- Free
- Purchased
- Consumer / Professional
- Online
- PC / Mac Applications
- Spreadsheet (Excel) based

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## Key Attributes

- Detail and Fidelity – Type and Amount of Input Data Required
  - Low
  - Medium
  - High
- Modeling – Future Investment Returns
  - Simple - Projected Return Rates
  - Historic Return Rates
  - Monte Carlo

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## Detail and Fidelity

- Low
  - Dozen input fields or less using summarized investment accounts
  - Simple fixed or average future rate of return
  - Requires just a few minutes
- Medium
  - Additional data input fields
  - Multiple investment accounts and assets
  - Allows one-time financial events or irregular income or expenses
  - Requires 10 – 15 minutes
- High
  - More data input fields and options
  - Social Security and Tax calculations
  - Allows for comparison of multiple scenarios
  - Potentially several hours to collect, input and analyze results

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# Modeling Investment Returns

- Average Returns
  - Simplest
  - Does not reflect the impact of volatility
  - Overly simplistic
- Historical Returns
  - Uses actual market data on the performance of asset classes
  - What would have happened in the past
  - Will the market really repeat itself as it had in the past
  - What historical starting point do you base your model on?
- Monte Carlo
  - Average return accounting for standard deviation
  - Requires expertise in choosing necessary mathematical parameters
  - Artificial randomness may not mimic the real world accurately

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## Calculator.net

<https://www.calculator.net/retirement-calculator.html>

Web  
Low Fidelity  
History – Average  
\$0

Your Age Now	<input type="text" value="63"/>
Your Planned Retirement Age	<input type="text" value="65"/>
Your Life Expectancy	<input type="text" value="95"/> <a href="#">estimate yours</a> , 79 in U.S. on average
Expected Social Security Income	\$ 2100 /Month <a href="#">estimate your number at SSA.gov</a>
Other Income After Retirement	\$ 0 /Month pension, rental property income...
Average Investment Return	<input type="text" value="5%"/>
Inflation Rate (Annual)	<input type="text" value="3%"/>
Your Current Income	\$ 75000 /Year
Income Needed After Retirement	<input type="text" value="125%"/> 70-80% to maintain life style
<input type="button" value="Calculate"/>	

### You will need \$1,643,652 at Age 65 to Retire

Savings Needed at 65: \$1,643,652  
Equivalent Purchase Power Now: \$1,549,300  
Lifestyle after Retirement: Much better than your current life style

#### Monthly Income at Age 65

Total:	\$8,288
From Savings:	\$6,060
From Social Security:	\$2,228
From Other Income:	\$0

#### Monthly Income at Age 95

Total:	\$20,118
From Savings:	\$14,710
From Social Security:	\$5,408
From Other Income:	\$0

#### Breakdown of Monthly Income at Age 65



20

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# moneychimp

[http://www.moneychimp.com/articles/randomness/retirement\\_odds.htm](http://www.moneychimp.com/articles/randomness/retirement_odds.htm)

Web  
Low Fidelity  
History – Historical  
\$0

Starting Principal at Retirement: \$2,000,000  
 Time in Retirement: 30 years  
 Desired Annual Withdrawal: \$100,000  
☒ Adjust for Inflation  
 Principal you'd like to have left to leave to your heirs: \$0  
 Portfolio: 60% stocks / 40% cash  
 Use market data from 1871 through 2020  
 "Stocks" lose 0.23% in annual expenses  
 "Cash" earns 1% above inflation

**Results**

S&P 500 returns (dividends included) Robert Shiller and Jorid Finance

121 possible 30-year periods  
80% success rate

24 failures:

- 1902-1930 (28 years)
- 1905-1933 (28 years)
- 1906-1930 (24 years)
- 1907-1933 (26 years)
- 1909-1937 (28 years)
- 1910-1939 (29 years)
- 1911-1938 (27 years)
- 1912-1939 (27 years)
- 1929-1954 (25 years)
- 1937-1964 (27 years)
- 1959-1988 (29 years)
- 1960-1987 (27 years)
- 1962-1986 (24 years)
- 1963-1991 (28 years)
- 1964-1988 (24 years)
- 1965-1986 (21 years)
- 1966-1986 (20 years)
- 1967-1991 (24 years)
- 1968-1988 (20 years)
- 1969-1988 (19 years)
- 1970-1994 (24 years)
- 1971-1997 (26 years)
- 1972-1996 (24 years)
- 1973-1994 (21 years)

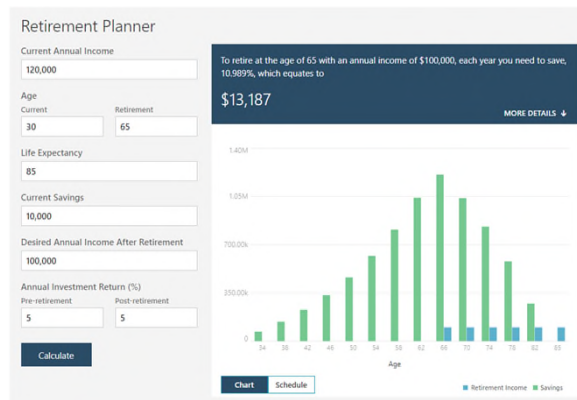
21

21

# msn | money

<https://www.msn.com/en-us/money/tools/retirementplanner>

Web  
Low Fidelity  
History – Average  
\$0



To retire at the age of 65 with an annual income of \$100,000, each year you need to save, 10.989%, which equates to

**\$13,187**

[MORE DETAILS](#)

Age	Cumulative Savings	Interest	Retirement Income	Ending Balance
30	10,000	0	-	10,000
31	23,187	500	-	23,687
32	36,374	1,184	-	38,059
33	49,561	1,903	-	53,149

80	507,569	25,378	100,000	432,948
81	432,948	21,647	100,000	354,595
82	354,595	17,730	100,000	272,325
83	272,325	13,616	100,000	185,941
84	185,941	9,297	100,000	95,238
85	95,238	4,762	100,000	0

[Chart](#) [Schedule](#)

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# Financial Mentor

<https://financialmentor.com/calculator/best-retirement-calculator>

Web  
Medium Fidelity  
History – Average  
\$0

### Ultimate Retirement Calculator

**Personal Information**

1 Enter age at end of current year: 67 Yrs

2 Enter age you plan to retire: 65 Yrs

3 Enter life expectancy: 90 Yrs

**Conventional Retirement Planning**

4 Current total savings: \$ 2000000

5 Desired annual retirement income: \$ 100000

6 Desired estate at death: \$ 0

7 Monthly savings contributions

8 Amount: \$ 0 Annual inc. (%): 0 % Start & Stop Ages: 0 Yrs to 0 Yrs

Remove or add another contribution.

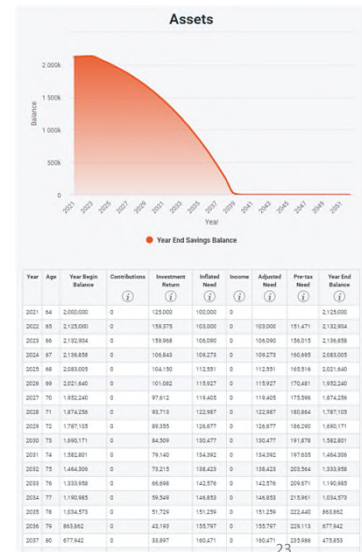
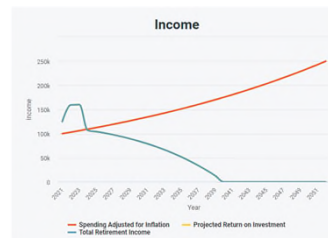
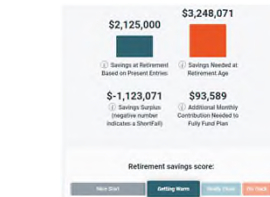
9 Average Annual Investment Return

10 From now (87 to age: 67) apply this ROI: 7.5 %

11 From 67 to end of life (90) apply this ROI: 5 %

12 Estimated tax rate during retirement: 22 %

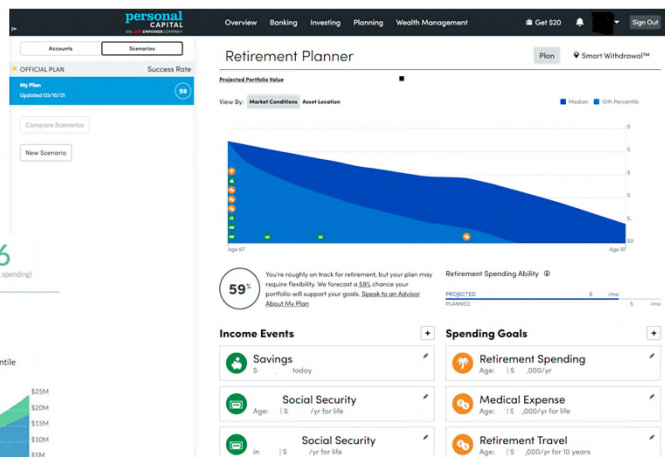
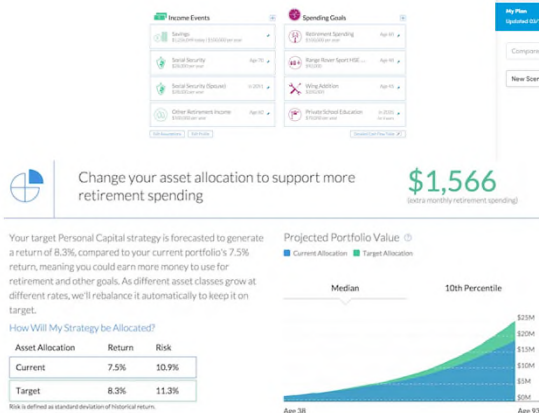
13 Estimated average annual inflation rate: 3 %



23

# Personal Capital

<https://www.personalcapital.com/>



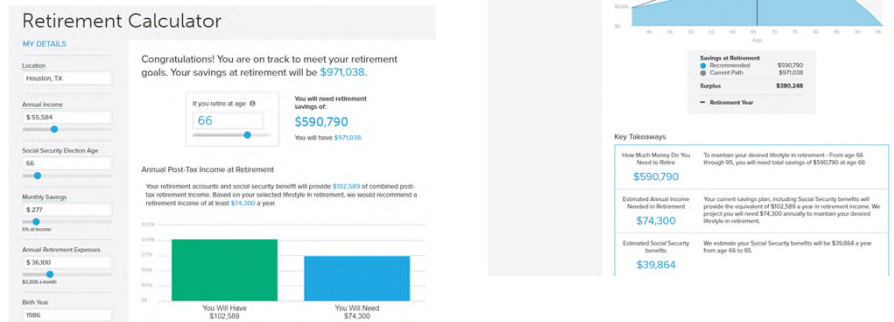
24

24

# smartasset

<https://smartasset.com/retirement/retirement-calculator>

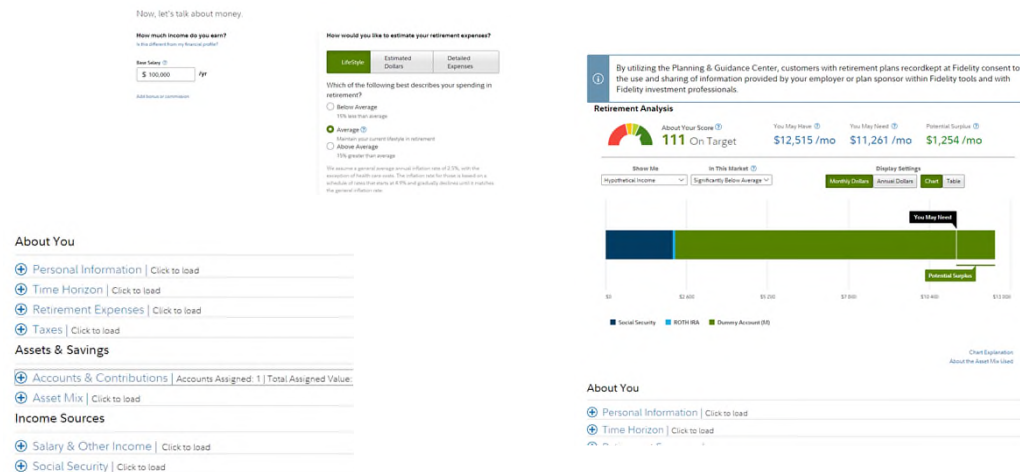
Web  
Low Fidelity  
History – Average  
\$0



25

25

# Fidelity Investments



26

26

# T Rowe Price

<https://www.troweprice.com/usis/advice/tools/retirement-income-calculator>

Web  
Medium Fidelity  
History – Monte Carlo  
\$0

## Personal Information

Tell us a little about yourself! All fields are required.

Adam - Eve

First Name: Adam Eve  
Gender: Male Female  
Date of Birth: 07/1957 07/1961  
Employment Status: Retired Retired  
Marital Status: Married  
State of Residence: Texas

## About You

Adam - Age 63 Eve - Age 59

Retired Retired  
Eligible for Social Security? Yes No

Additional Social Security Information

Is Adam currently receiving benefits? Yes No  
What year did Adam retire? 2020  
Adam's Employment Income in 2020? \$ 1  
What year did Eve retire? 2020  
Eve's Employment Income in 2020? \$ 1

Annual Expenses: \$ 100,000  
State of Residence: Texas

Your Retirement Savings

Total Amount Saved for Retirement Today: \$ 1,000,000  
Portion in Qualified Retirement Accounts (e.g., 401(k), 403(b), IRA): 50%  
How do you plan to invest your retirement assets? Moderate  
Will you receive other cash in the future to fund retirement? Yes No

## Will you be in the retirement Confidence Zone?

Future returns are unpredictable. We test 1000 possible future outcomes to estimate the likelihood you'll live in the Confidence Zone.  
If enough of them are successful, you're in the Confidence Zone. This is called your Probability of Success.

You're Above the Confidence Zone

98%  
Probability of Success  
Explore Results

## Play Zone

Make changes to improve your probability or find options you might like better.

### Part-Time Work

Additional Year Work

Additional Cash Received

Additional Cash Received

Additional Cash Received

Additional Cash Received

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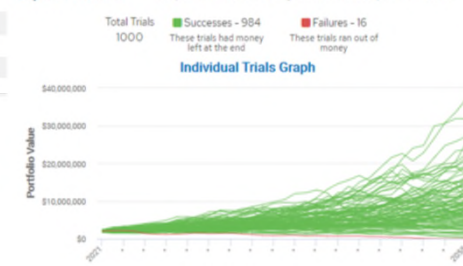
Additional Cash Received

Additional Cash Received

Additional Cash Received

## Explore Results

Your plan ran 1000 times using 1000 different sequence of returns.



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# Vanguard

<https://retirementplans.vanguard.com/VGApp/pe/pubeducation/calculators/RetirementNestEggCalc.jsf>

Web  
Low Fidelity  
History – Monte Carlo  
\$0

## Retirement Nest Egg Calculator

How long will your retirement nest egg last? How much could your investments grow? Answer a few questions to see a long-term projection. Then try making a few changes to view the impact on your results.

Your Retirement Plan

How many years should your savings last? 30 years

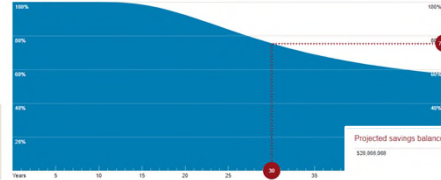
What is your savings balance today? \$2,000,000

How much do you spend each year? \$80,000 (4% of savings)

How are your savings allocated?

60% Stocks  
25% Bonds  
15% Cash

## How long will your savings last?



## How long will your savings last?

Projected savings balance

Projected savings balance

Projected savings balance

Projected savings balance

Projected savings balance

Projected savings balance

Projected savings balance

Projected savings balance

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Projected savings balance

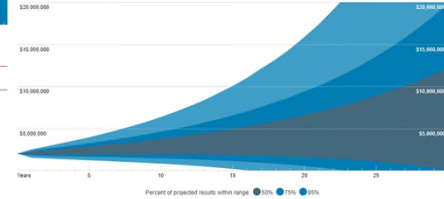
Projected savings balance

Projected savings balance

Projected savings balance

Projected savings balance

## Projected savings balance



## How long will your savings last?

Projected savings balance

Projected savings balance

Projected savings balance

Projected savings balance

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Projected savings balance

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28

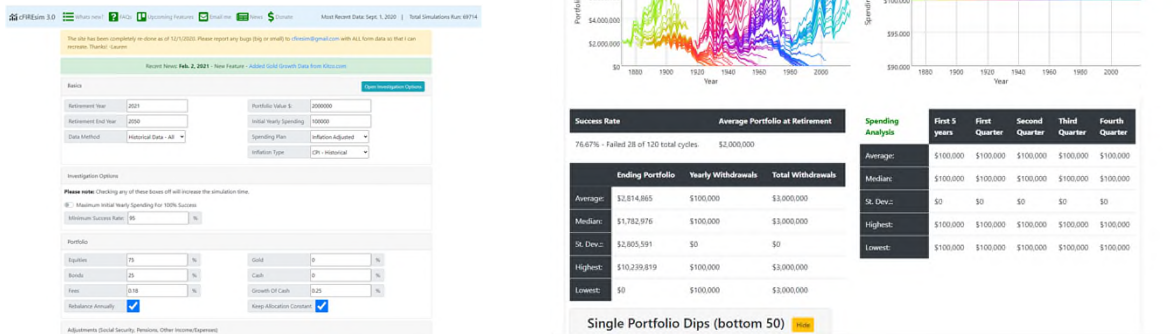


# cFIREsim

<https://www.cfiresim.com/>

Crowdsourced FIRE Simulator  
Web  
Medium Fidelity  
History – Historical  
\$0

Link to this simulation: <https://www.cfiresim.com/04150346-c7f0-4446-bd21-65e3031b6d2c> - Export to CSV



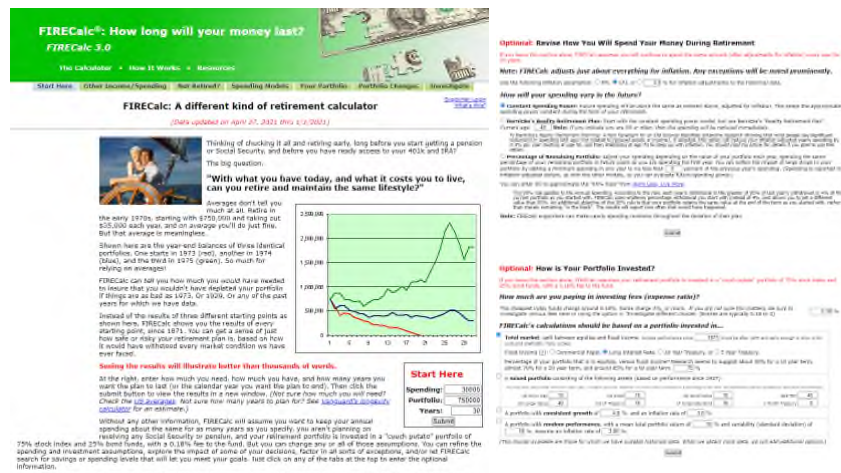
29

29

# FIREcalc

<https://www.firecalc.com/>

Web  
Medium Fidelity  
History – Average, Historical, Monte Carlo  
\$0



30

30

## FIREcalc

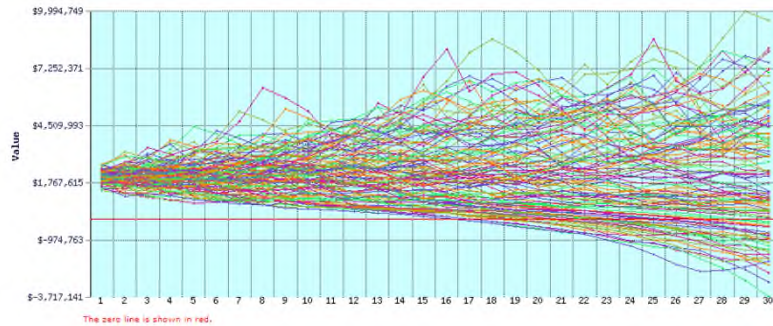
<https://www.firecalc.com/>

Year-by-Year Portfolio Balances

## Input Data for this model

Withdrawals	100,000
How long	30
90% Rule from spreadsheet, Low Mode*	0
Percentage used for 90% Rule*	0
Bernike Spending Reductions**	48
Current Age for scheduling Bernike spending reductions**	2,000,000
Starting Portfolio	2%
Expense Ratio	0.18%
Retirement Year*	2021
Contributions until then*	0
Social Security**	0
Starting in*	2004
Spouse Social Security**	0
Starting in*	2006
Other withdrawal change*	+0
Starting in*	2004
Inflation adjuster*	yes
Other withdrawal change*	+0
Starting in*	2006
Inflation adjuster*	yes
Other withdrawal change*	+0
Starting in*	2006
Inflation adjuster*	yes
Lump sum change to portfolio*	+0
In year*	2004
Lump sum change to portfolio*	+0
In year*	2006
Inflation Rate selected*	CPI
Fixed income model*	Lingwood
Overide start year*	1871
Terminal value*	0
US 100 Cap**	10
US Small**	10
US Divd**	10
S&P 500**	40
US Large Value**	10
US LT Treasury**	10
LT Corporate Bond**	10
1 Month Treasury**	5

\* - Used in retirement 1992-2021



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## i-ORP

<https://i-orp.com/Plans/index.html>

<https://i-orp.com/Plans/extended.html>

## The Essential ORP Narrative

1. Essential ORP asks for the financial facts of your retirement and computes your optimal savings withdrawal when

Amounts are in thousands of dollars  
(example for \$10,000, enter 10)

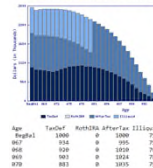
Current Age(s)	Retiree	Spouse
Retirement Age (Default Age 65)	67	63
Tax-deferred Savings (IRA, 401K, etc.)	650	600
Tax-deferred Maximum Annual Contribution	6	6
Roth IRA Savings	6	6
Both IRAs Maximum Annual Contribution	6	6
Regular Savings and Brokerage Accounts	4,000	
Maximum Annual Contribution of All Types	6	
Social Security Benefits		
Age to Begin Benefits		
Pensions and Other Income, indexed to inflation	\$2.9	\$2.8
Pensions and Other Income, not indexed to inflation	6	6
Pensions Beginning Age (Default: Retirement Age)	67	63

Liquid Assets	Home	Other
Value of Home or Business	4750	6
Original Cost, For Tax Purposes	6,000	6

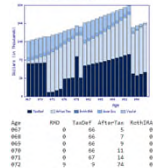
Options  
Your Choice



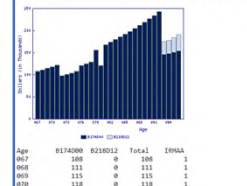
Nominal Asset Location Report - Assets by Saving Account Type in Inflation Dollars.



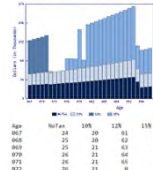
Real Withdrawal Report - Plan's Income and Spending in Today's Dollars.



IRMAA Report - Medicare Means Testing Premium Adjustments



Federal Tax Bracket Report - Amounts of Taxable Income in Each Tax Bracket



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## i-ORP Extended

<https://i-orp.com/Plans/extended.html>

**Enter all dollar amounts as thousands of dollars**  
(For example: Enter 10 for \$10,000.)

**Click on a yellow link for help**

**Reverse Mortgage**

Age to Start Reverse Mortgage Distribution

Lifetime Income Plan Annual Payments

Lump Sum Distribution

**Current Age(s)**

Retiree

Spouse

**Grassroots Retirement Income**

Social Security Benefits Current Benefits or PIA

Age to Begin Benefits (FRA)

Disability Insurance (check if it applies)

Social Security will continue full benefits?

Passive and Other Income, net of Inflation

Passive and Other Income, net of Inflation

Passive One Time, Lump Sum Distribution

Passive Beginning Age (Retirement Age)

Passive Survivors Benefit

Earned Income: Part-time and Otherwise

Earned Income Ending Age

Annuity Annual Distribution

Annuity Funding from the IRA

Age to Begin Annuity (Immediate Annuity)

Tortoise Dividend

Tortoise Funding from the IRA

**Retirement Accounts**

Tax-deferred Account Initial Balance

Tax-deferred Account After-tax Balance

Tax-deferred Account Maximum Annual Contribution

Both IRA Initial Balance

Both IRA Maximum Annual Contribution

Both IRA Minimum Balance

After-tax Account Initial Balance

After-tax Assets Cost Basis

Maximum Annual Contribution of All Types

Plan Surplus in current dollars (No Surplus)

**Retiree**

**Spouse**

**Tax-deferred**

**Both IRA**

**After-tax**

**Both IRA**

**After-tax**

**Maximum Annual Contribution**

**Plan Surplus**

**Illiquid Assets**

Asset Value

Cost Basis - Original Cost, for Tax Purposes

Monstrous or Lumpy - Balance due at sale

Age to Sell - Convert illiquid asset to liquid asset

**Home**

**Other**

**Asset Value**

**Cost Basis**

**Monstrous or Lumpy**

**Age to Sell**

**Allowable Case Act**

ACA - Taxable Income Limit

PLS - Premium Tax Credit

**Retiree**

**Spouse**

**ACA**

**PLS**

**Slide Path (Recommendation)**

Stock Allocation at Retirement (100%)

Bond Allocation at Retirement (0%)

Stock Allocation at Plan End (100%)

Bond Allocation at Plan End (0%)

Stock Investment Rate of Return (%)

Bond dividend yield (%)

Fixed Income % Yield (%)

Inflation

Safe Withdrawal Rate (%)

Taxes

After-tax Account Capital Gains Tax Rate (%)

Current Marginal Personal Income Tax Rate (%)

Retirement State Income Tax Deductions & Exemptions

Retirement State Income Tax Rate

Social Security Exemptions From State Income Taxes

Personal Income Exemptions From State Income Taxes

2-PEAT Retirement Income Management Simulation

Years to Begin Historical Simulation Management Plan

Risk Level

Money Cap

What's My Monte Carlo

**Tax-deferred**

**Both**

**Fixed Income**

**Income**

**Spending**

**Taxes**

**After-tax Account Capital Gains Tax Rate**

**Current Marginal Personal Income Tax Rate**

**Retirement State Income Tax Deductions & Exemptions**

**Retirement State Income Tax Rate**

**Social Security Exemptions From State Income Taxes**

**Personal Income Exemptions From State Income Taxes**

**2-PEAT Retirement Income Management Simulation**

**Years to Begin Historical Simulation Management Plan**

**Risk Level**

**Money Cap**

**What's My Monte Carlo**

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# Retiree Portfolio Model

<https://www.bogleheads.org/forum/viewtopic.php?p=1405885#p1405885>

[http://www.bogleheads.org/wiki/Retiree Portfolio Model](http://www.bogleheads.org/wiki/Retiree_Portfolio_Model)

<https://www.dropbox.com/s/s4i85jch4nc4dge/Retiree%20Portfolio%20Model%20v21.1.xlsm?dl=0>

Excel  
High Fidelity  
History – Average  
\$0

## Retiree Portfolio Model

From Boogieheads:

The **Retiree Portfolio Model** is a downloadable Excel spreadsheet created by a retiree for retirees. It models the most common financial aspects of a retiree and their spouse's lives, including pensions, Social Security benefits, living expenses, IRA Required Minimum Distributions, purchase of an annuity, sale of a house, and many other items including Federal and state income taxes. All of this data is used to create a model of their accounts over a period of 1 to 40 years.

A feature of this model allows the user to compare their normal portfolio results with one that includes alternative choices, such as doing Roth IRA conversions, choosing alternative Social Security starting ages and benefits, or buying a Single Premium Immediate Annuity. The model was developed by forum member BigFoot48.

- Contents [hide]
- 1 Downloading and support
- 2 Methodology
- 3 Screenshots
- 4 See also
- 5 External links



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# Pralana Gold

<https://pralanaretirementcalculator.com/>

[http://www.bogleheads.org/wiki/Retiree\\_Portfolio\\_Model](http://www.bogleheads.org/wiki/Retiree_Portfolio_Model)

<https://www.dropbox.com/s/5485jch4nc4dgc/Retiree%20Portfolio%20Model%20v21.1.xlsm?dl=0>

Excel  
High Fidelity  
History – Average  
\$99

Assumptions		Names and Demographics		Expenses	
Inflation (%)	4.0%	Your Name	BUD	Period 1 Expenses	54,000
Income Split	AA	Your Birthdate	1/1/1964	Period 2 Expenses	Year
Average Real Rate of Return (%)	2.0%	Retirement Age	67	Period 3 Expenses	Year
Amount of Current Savings	500,000	Life Expectancy	95	One-Time Expenses (in today's \$)	
Your Tax-Deferred Accounts		Pre-Retirement Employment Income (in today's \$)		Expense 1	Year
Spouse's Tax-Deferred Accounts		Annual Income Amount	70,000	Expense 2	Year
Roth Accounts		Annual Percentage Increase	4.0%	Expense 3	Year
Regular Investment Accounts		Contributions to 401K (\$)	20,000		
Regular Cash Accounts		Contributions to Roth IRA (\$)	10,000		
		Contributions to a Defined Benefit Plan (\$)			
		Post-Retirement Employment Income (in today's \$)			
		Annual Amount			
		Number of Years You Plan to Work			
		Pension Benefits (in Future \$)			
		Annual Amount			
		Maximum Cost of Living (COLA) Adjustments			
		Social Security Benefits (in today's \$)			
		Annual Benefit Amount at FRA	12,000		
		Age at which you plan to start benefits	70		

Recurring Annual Expenses (in today's \$)

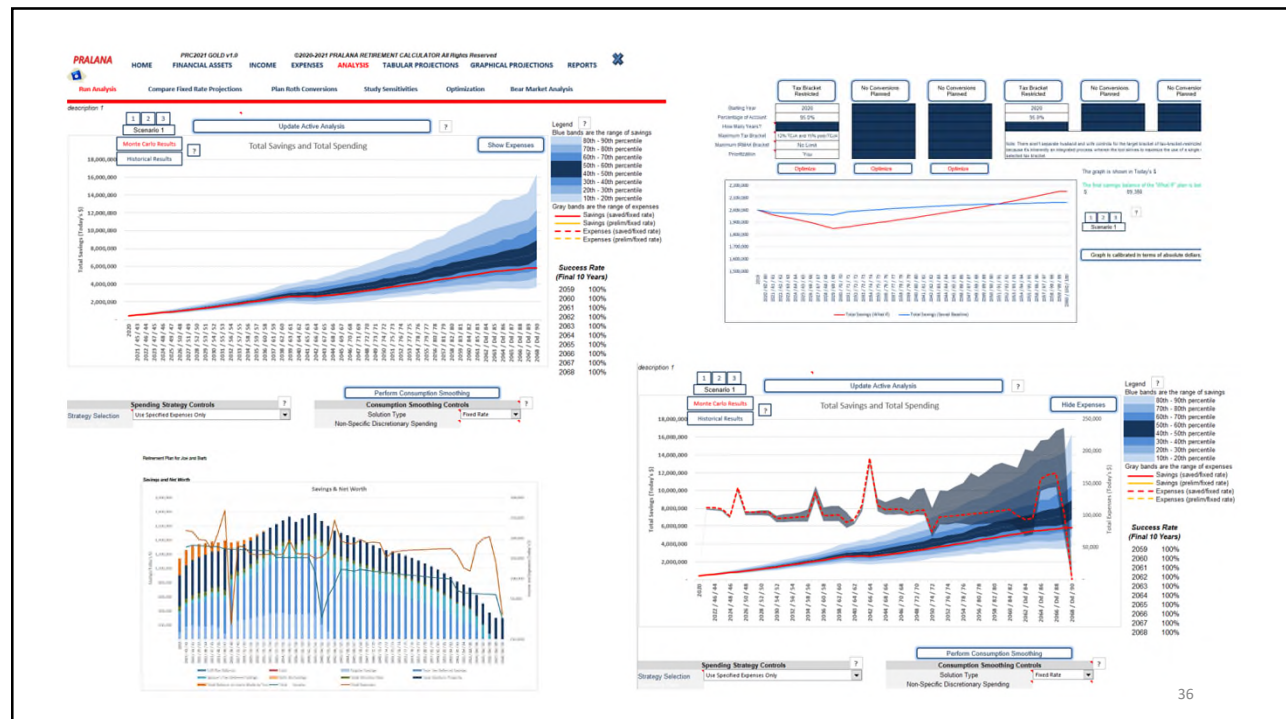
One-Time Expenses (in today's \$)

Populate PRC from These Single Inputs

Go to Home Page

HEALTH TRENDS		10-MY SCENARIO 1	10-MY SCENARIO 2	% of Specified Expenses Met with this Plan	Additional Info/Notes
Period 1: Pre-Retirement Full-Time Income is eligible for Medicare and you plan to pay your own costs	Insurance Premiums	2,000	2,000	2,000	
Period 2: 20% of your work full-time income is eligible for Medicare and you plan to pay your own costs	Insurance Premiums	1,000	1,000	1,000	
Period 3: Only one of you is eligible for Medicare	Insurance Premiums	1,000	1,000	1,000	
Period 4: Both of you are eligible for Medicare	Insurance Premiums	1,000	1,000	1,000	
Period 5: Both of you are eligible for Medicare	Insurance Premiums	1,000	1,000	1,000	
Period 6: Both of you are eligible for Medicare	Insurance Premiums	1,000	1,000	1,000	
Period 7: Both of you are eligible for Medicare	Insurance Premiums	1,000	1,000	1,000	
Period 8: Both of you are eligible for Medicare	Insurance Premiums	1,000	1,000	1,000	
Period 9: Both of you are eligible for Medicare	Insurance Premiums	1,000	1,000	1,000	
Period 10: Both of you are eligible for Medicare	Insurance Premiums	1,000	1,000	1,000	
Period 11: Both of you are eligible for Medicare	Insurance Premiums	1,000	1,000	1,000	
Period 12: Both of you are eligible for Medicare	Insurance Premiums	1,000	1,000	1,000	
Period 13: Both of you are eligible for Medicare	Insurance Premiums	1,000	1,000	1,000	
Period 14: Both of you are eligible for Medicare	Insurance Premiums	1,000	1,000	1,000	
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Period 16: Both of you are eligible for Medicare	Insurance Premiums	1,000	1,000	1,000	
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# Flexible Retirement Planner

<https://www.flexibleretirementplanner.com/wp/planner-launch-page/>

Java Application  
High Fidelity  
Model – Average and Monte Carlo  
\$0 - \$20

Summary View Detailed View

Enter retirement plan information below.

Current Age: 67 Retirement Age: 65 Life Expectancy: 95

Taxable Portfolio Value: 1000000 Tax Deferred Portfolio Value: 1000000

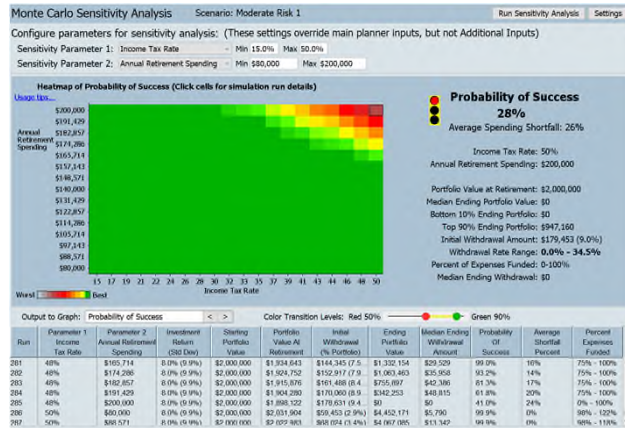
Investing Style: Moderate Risk (Stocks/Bonds/REIT) 45% / 45% / 14%

Return - Average: 8.0% Return - Std Dev: 3.3%

Initial Withdrawal Age: 65

Taxable Annual Savings: Tax Free Annual Savings: Annual Retirement Income: 0 Retirement Income Start Age: 68 Annual Retirement Spending: 100000 Spending Policy: Flexible

Investment Tax Rate: 15% Income Tax Rate: 22%



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# Flexible Retirement Planner



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# OnTrajectory

<https://www.ontrajectory.com/>

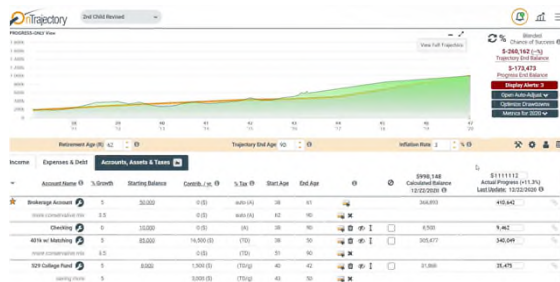
<https://www.ontrajectory.com/guides/guide112.html>

<https://www.choossefi.com/ontrajectory-review/>

<https://www.budgetsaresexy.com/ontrajectory-review-love-child-excel-cfresim-calculator/>

<https://www.getrichslowly.org/ontrajectory-retirement-calculator/>

Online  
High Fidelity  
History – Historical, Monte Carlo  
\$5 / month - \$50 / year



## What's NEW with OnTrajectory?

### January 2021 Update

With our new 2021 update, we have added a new feature to our Monte Carlo simulation. This feature allows you to see the results of your Monte Carlo simulation in a more detailed way. You can now see the results of your Monte Carlo simulation in a more detailed way. You can now see the results of your Monte Carlo simulation in a more detailed way.

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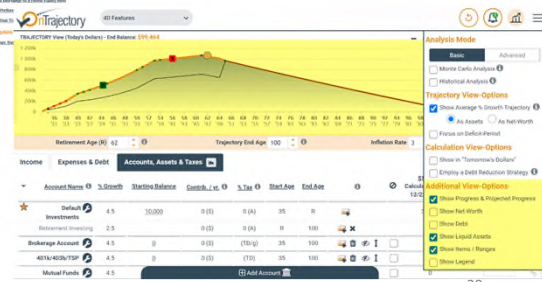
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# MaxiFi Planner

<https://maxifiplanner.com/>

Web  
High Fidelity  
History – Average, Monte Carlo  
\$99 - \$139

## Goodbye to Guesswork

Conventional financial planning software and "free" online tools use the Replacement Rate method based on outdated, generic "Rules of Thumb." This simplistic method "guesstimates" targets for spending and saving.

These "targets" are the basis for your whole financial plan. If they are wrong —too high or too low—the mistakes compound over time and you're in trouble.

<https://financialanalystinsider.com/maxifi-planner-review/>

<https://thewealthcircle.com/maxifi-reviews/>

<https://www.bogleheads.org/forum/viewtopic.php?t=223851>

<http://www.theretirementcafe.com/2019/05/going-it-alone-with-retirement-planning.html>

<https://www.advisorperspectives.com/articles/2019/04/22/the-major-technology-breakthrough-to-guide-portfolio-choice>

<https://support.maxifi.com/support/solutions/articles/35000157621-how-does-maxifi-differ-from-my-current-financial-planning-tool->

## The Economics Approach In Action

It's virtually impossible to find your household's highest sustainable spending level. Income and expenses change every year and no financial decision stands alone: income affects taxes, taxes affect spending. Social Security benefits and retirement account withdrawals affect income, which affects taxes, and on and on.

MaxiFi software makes it possible. It can correctly calculate the highest spending level your household's income and assets can support and provide a plan to sustain and protect it for life.

MaxiFi software uses iterative dynamic programming methods developed by our founder and President Laurence Kotlikoff. These methods are similar to those used in bioinformatics and aerospace engineering—actual rocket science. It's why MaxiFi software is the only software powerful and accurate enough to put the Economics Approach into action.

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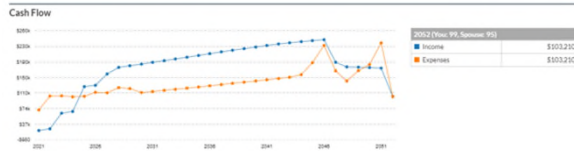
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## New Retirement

Plan Analysis &gt; Cash Flow Forecast



Plan Analysis &gt; Net Worth



### Plan Inspector > Income & Expenses



**Estimated Taxes** [Learn More...](#)



Gross Taxable Income by Source [Learn More.](#)



**Surplus-Gap** [Learn More](#)



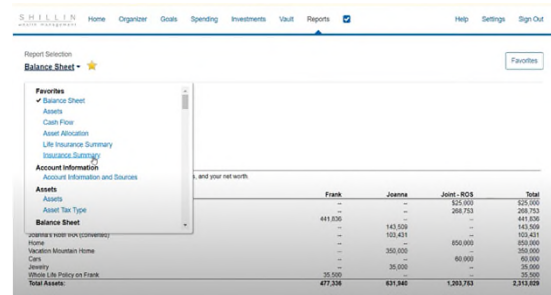
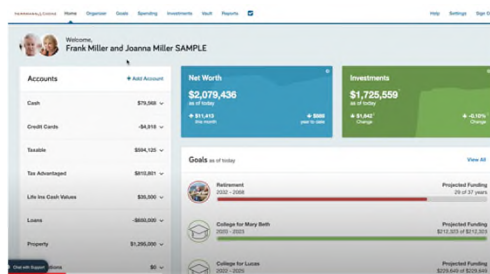
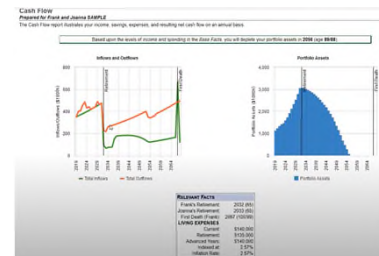
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# eMoney Advisor

Fidelity Wealth Technologies  
Web  
High Fidelity

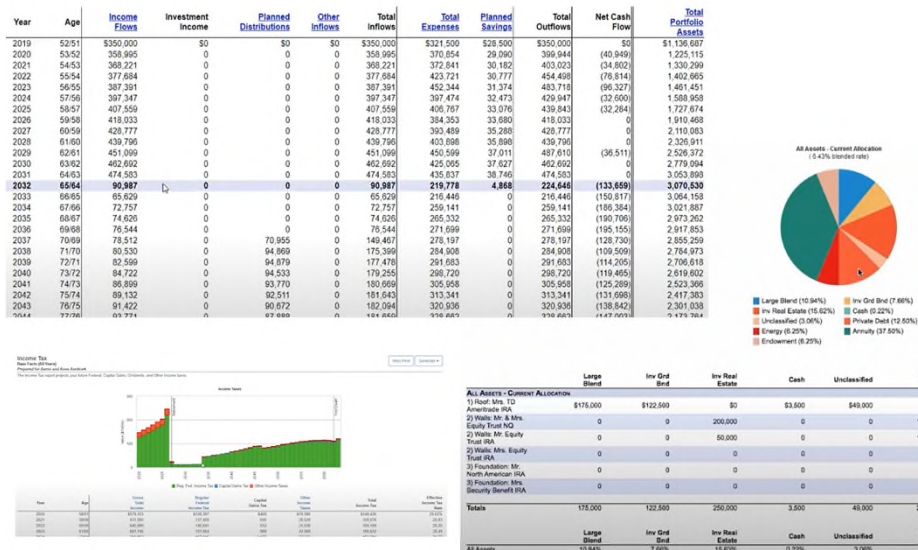
<https://planvisionmn.com/>  
\$ 189



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## eMoney Advisor



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## IncomeStrategy

<https://incomestrategy.com/>

Web  
High Fidelity  
History - ?  
\$20/mo \$50/mo

Professional Version:  
IncomeSolver  
\$1,900/yr

Social Security Solutions  
SSAnalyzer

- Income Management
  - Asset Allocation
  - Asset Location
  - Rebalancing
  - Tax Minimalization
- Withdrawal Strategy
  - Sequencing
  - Coordination
  - Roth Conversions
- Social Security Optimization
  - Medicare
  - Health Spending
  - Variable Spending

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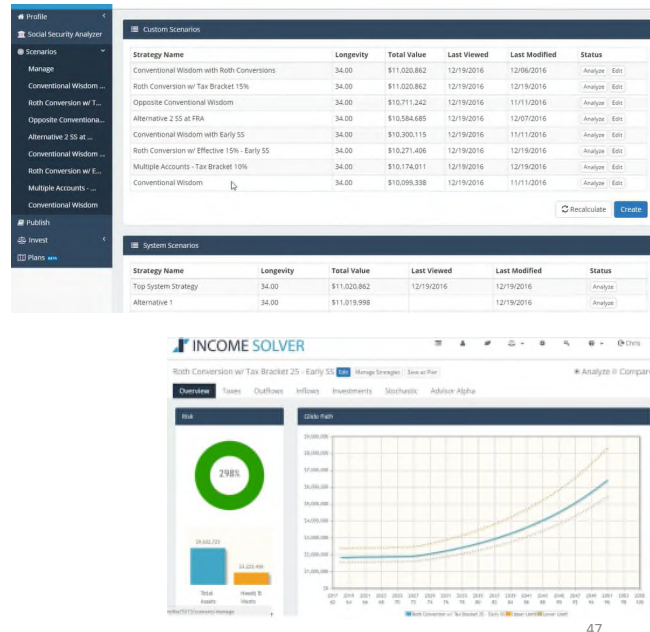
## IncomeStrategy

### Withdrawal Sequence

Withdrawal sequence is about how you should “tap” your retirement savings. It is identifying the proper order, appropriate account, specific holding and the right amount to liquidate from the assets you hold in your 401k, Traditional IRA, Roth, Annuity, CD's etc.... There may be significant advantages to tapping more than one account at a time.

### How do people get it wrong?

Unfortunately, some people will draw from whichever account, whenever they want and ignore the implications – we call it the “Willy Nilly” strategy. Others may rely on a financial advisor who defaults to “conventional wisdom” which suggests you should tap and fully liquidate in this order: 1. Taxable 2. Tax Deferred 3. Tax Exempt. Sadly, this will expose the retiree to significant and unnecessary tax exposure. You can do better.



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## Resources

- The Best Retirement Calculators
- Online Retirement Calculators - What each does well, and where they fall short
- 8 Ways Online Retirement Planning Is Superior to That Printed Report Stashed Somewhere in Your Desk
- Is Financial Planning Software Incapable Of Formulating an Actual Financial PLAN? - Michael Kitces
- Bogleheads® retirement planning start-up kit
- The Best Retirement Calculator
- Going it Alone with Retirement Planning Software
- The Major Technology Breakthrough to Guide Portfolio Choice
- 5 Reasons Retirement Calculators Can't Be Trusted
- The 10 Best Retirement Calculators
- <https://www.caniretirement.com/the-best-retirement-calculators/>
- <https://www.thebalance.com/retirement-calculator-reviews-4061796>
- <http://www.aail.com/computerized-investing/article/8-ways-online-retirement-planning-is-superior-to-that-printed-report-stashed-somewhere-in-your-desk>
- <https://www.kitces.com/blog/is-financial-planning-software-incapable-of-formulating-an-actual-financial-plan/>
- [https://www.bogleheads.org/wiki/Bogleheads%C2%AE\\_retirement\\_planning\\_start-up\\_kit](https://www.bogleheads.org/wiki/Bogleheads%C2%AE_retirement_planning_start-up_kit)
- <https://www.theretirementmanifesto.com/best-retirement-calculator/>
- <http://www.theretirementcafe.com/2019/05/going-it-alone-with-retirement-planning.html>
- <https://www.advisorperspectives.com/articles/2019/04/22/the-major-technology-breakthrough-to-guide-portfolio-choice>
- <https://financialmentor.com/retirement-planning/how-much-money-do-i-need-to-retire/retirement-calculators-2/17130https://financialmentor.com/retirement-planning/how-much-money-do-i-need-to-retire/retirement-calculators-2/17130>
- <https://www.newretirement.com/retirement/best-retirement-calculators/>

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## More Resources

- Infinite Retirement Calculator
- WealthTrace
- Motley Fool Retirement Planning
- The Best Retirement Calculator Review – I Review 26 In One Day
- Retirement Withdrawal Strategies
- Tax-savvy withdrawals in retirement
- <https://eis271828.blogspot.com/2010/08/infinite-retirement-calculator.html>
- <https://www.mywealthtrace.com/>
- <https://www.calxml.com/calculators/retirement-planning?skn=606>
- <https://chiefmofficer.org/2018/07/02/i-slogged-through-26-different-retirement-calculators-will-what-i-learned-surprise-you-calculatormountain/>
- <https://retirewire.com/retirement-withdrawal-strategies/>
- <https://www.fidelity.com/viewpoints/retirement/tax-savvy-withdrawals>

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