# Financial Plan & Report – Basic

Prepared for

**John and Jane Smith**

**January 15, 2026**

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# Introduction

- This report has been created from the **LCF Planner** tool developed by ***Lifecycle Finance, LLC*** to enable individuals and families **model their finances and create a financial plan for every phase of their life**. Whether you are early in your career, starting and growing a family, preparing for retirement or already in your golden years, this tool allows you to model every aspect of your "financial life" and take specific actions to meet your financial goals

- The tool takes detailed inputs provided by you and models your family's **income, expenses, savings, investment accounts, asset allocations, expected rate of return and tax filing status** and:

  i. Calculates your **Cash Flow & Net Worth** every year upto your life expectancy age,
  ii. Runs **Monte Carlo Simulations** to quantify uncertainty of investment returns,
  iii. Does a **Sensitivity Analysis** of parameters you control so you can make changes to meet your goals,
  iv. Provides a **Financial Plan & Report** that summarizes the information above

- ***This report is a starting point only***. The goal of this report is to **give you an *"initial snapshot"* of your finances and guide you thru the next steps required to complete your financial plan**.

# Executive Summary

1. The ***Liquid and Total Net Worth*** at the husband and wife's life expectancy age ***using a Fixed Rate of Return assumption*** is:

| RESULTS | Husband | Wife | Estate Plan/ Target |
|---|---|---|---|
| Can you Retire at Desired Age? | YES | YES | |
| Liquid Net Worth at Life Expectancy Age | $5,694,603 | $7,291,259 | $1,000,000 |
| Total Net Worth ($+Prop.) at Life Exp. Age | $6,147,444 | $7,811,431 | |

2. Stock Market Returns vary from year-to-year. The ***Probability of Success*** of not running out of money at the husband and wife's life expectancy age ***using a Monte Carlo Simulation*** is:

| RESULTS | Fixed Rate of Return Results | | Monte Carlo Results | |
|---|---|---|---|---|
| | Husband | Wife | Husband | Wife |
| Can you Retire at Desired Age? | YES | YES | YES | MAYBE |
| $$'s/Success % at Life Exp. Age | $5,694,603 | $7,291,259 | 97% | 90% |
| Net Worth ($+Equity) at Life Exp. Age | $6,147,444 | $7,811,431 | | |
| Estate Plan/Target & Success % | | $1,000,000 | MAYBE ---> | 86% |

A detailed assessment and explanation of your Inputs & Assumptions, Cash Flow & Net Worth Analysis, Sensitivity Analysis and results from Optimizers to meet various Goals are included in the following pages of the report

# INPUTS & ASSUMPTIONS

- ***Carefully review*** your Inputs on pages 6 thru 12
- ***Correct*** any errors and re-run **LCF Planner**
- Results & Conclusions are ***highly dependent*** on Inputs & Assumptions

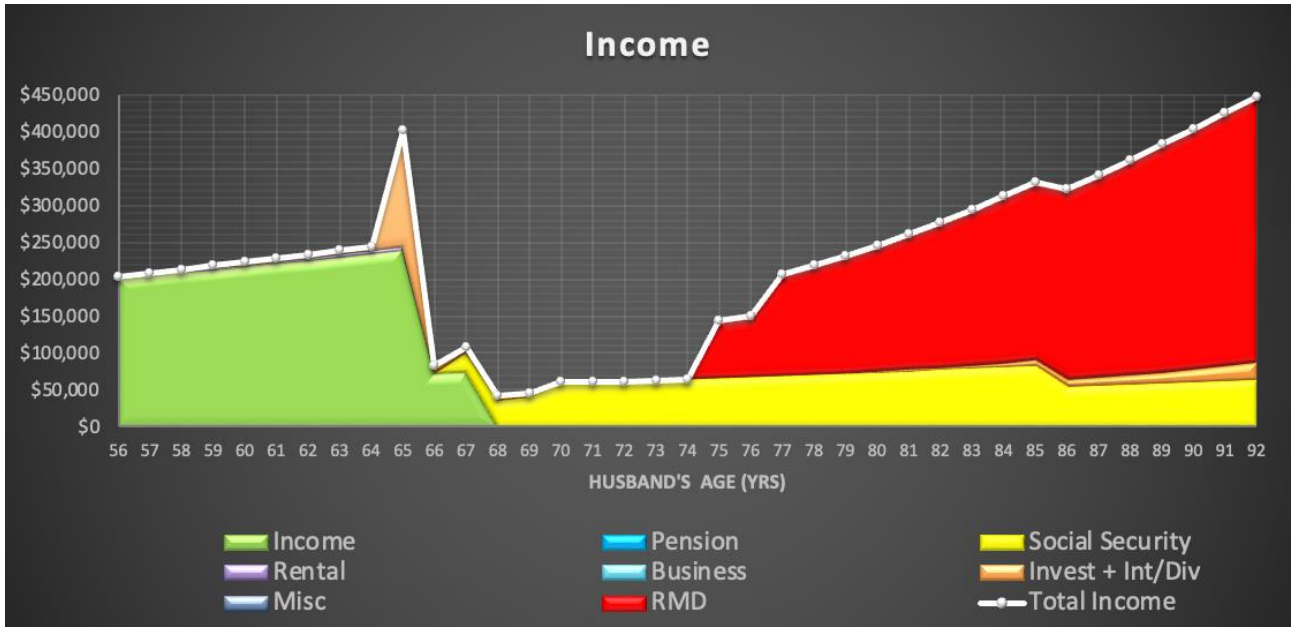
# Inputs & Assumptions – *Demographics & Income*

## Demographics

| | Husband | Wife |
|---|---|---|
| Current Age | 56 | 54 |
| Life Expectancy Age | 85 | 90 |
| Desired Retirement Age | 65 | 65 |

## Income

| | Husband | Wife |
|---|---|---|
| Current Income | $140,000 | $60,000 |
| Annual Increase in Income | 2% | 2% |
| Other Income Sources | Go to Detailed_Inputs Tab | |
| Retirement Income | | |
| Retirement - Pension | $0 | $0 |
| Retirement - Social Security @FRA | $35,000 | $20,000 |
| Age When Pension Starts | 60 | 60 |
| Age when SS Starts | 67 | 67 |




| Hsb Ret. Inc & Stop Age | Hsb Birth Date / Hsb Retire Date |
|---|---|
| $0 | 3/26/1968 |
| 65 | 12/31/2033 |

| Wife Ret. Inc & Stop Age | Wife Birth Date / Wife Retire Date | Soc. Security Annual Inc. |
|---|---|---|
| $0 | 10/19/1970 | 2.5% |
| 65 | 12/31/2035 | |

| Biz Income & Ann. Incr. | Investment Income | Misc Income |
|---|---|---|
| $0 | $0 | $0 |
| 0.0% | | |

| Year | Hsb Age | Wife Age | Annual Income: Husband Income | Husband Pension | Husband Social Security | Wife Income | Wife Pension | Wife Social Security | Rental Property Income | Business Income | Investment Income | Misc Income |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 56 | 54 | $140,000 | $0 | $0 | $60,000 | $0 | $0 | $1,267 | $0 | $0 | $0 |
| 2 | 57 | 55 | $142,800 | $0 | $0 | $61,200 | $0 | $0 | $1,563 | $0 | $0 | $0 |
| 3 | 58 | 56 | $145,656 | $0 | $0 | $62,424 | $0 | $0 | $1,868 | $0 | $0 | $0 |
| 4 | 59 | 57 | $148,569 | $0 | $0 | $63,672 | $0 | $0 | $2,181 | $0 | $0 | $0 |
| 5 | 60 | 58 | $151,541 | $0 | $0 | $64,946 | $0 | $0 | $2,504 | $0 | $0 | $0 |
| 6 | 61 | 59 | $154,571 | $0 | $0 | $66,245 | $0 | $0 | $2,835 | $0 | $0 | $0 |
| 7 | 62 | 60 | $157,663 | $0 | $0 | $67,570 | $0 | $0 | $3,176 | $0 | $0 | $0 |
| 8 | 63 | 61 | $160,816 | $0 | $0 | $68,921 | $0 | $0 | $3,528 | $0 | $0 | $0 |
| 9 | 64 | 62 | $164,032 | $0 | $0 | $70,300 | $0 | $0 | $3,889 | $0 | $0 | $0 |
| 10 | 65 | 63 | $167,313 | $0 | $0 | $71,706 | $0 | $0 | $4,260 | $0 | $0 | $0 |
| 11 | 66 | 64 | $0 | $0 | $0 | $73,140 | $0 | $0 | $0 | $0 | $0 | $0 |
| 12 | 67 | 65 | $0 | $0 | $26,753 | $74,602 | $0 | $0 | $0 | $0 | $0 | $0 |

- The first 12 years of your income is shown in the table.
- Check Inputs for accuracy to ensure validity of results


**CAUTION**: Created by an engineer; not financial, tax, or legal advice. Projections are estimates based on user data and do not guarantee future results; consult a licensed professional before taking action

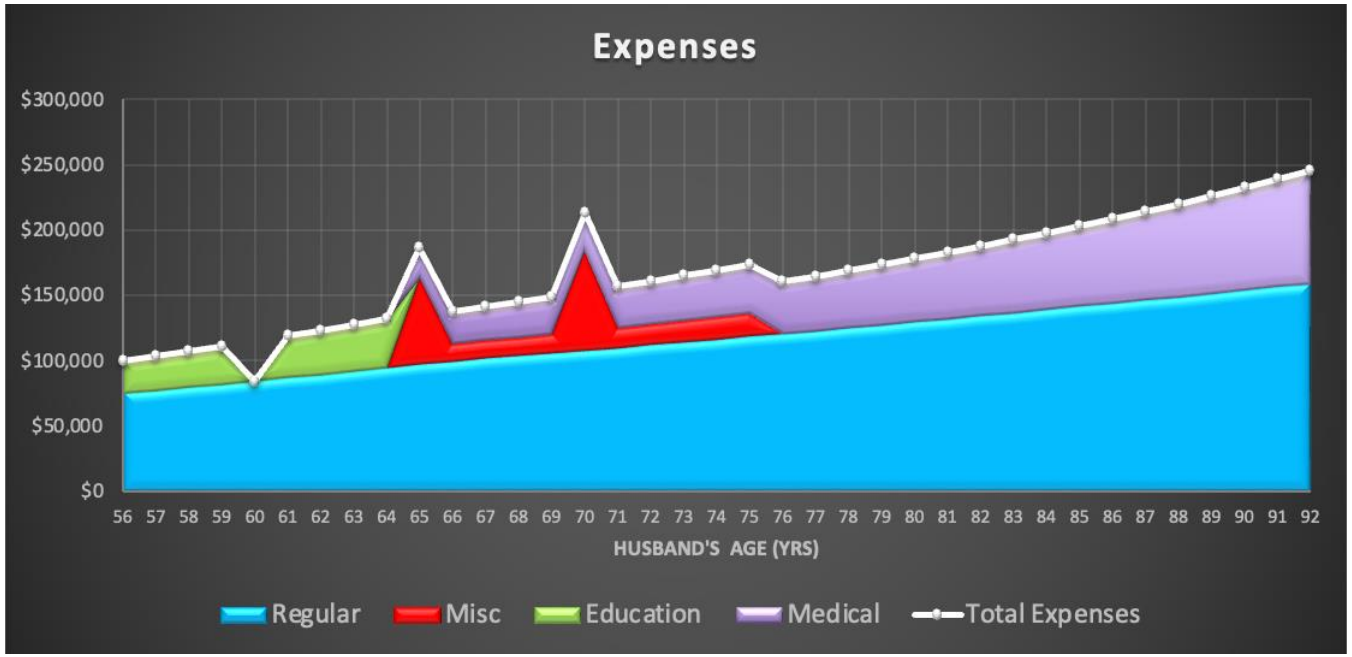
# Inputs & Assumptions – *Expenses*

## *Expenses*

| | |
|---|---|
| Recurring Yearly Expense | $75,000 |
| Non-Recurring "Special" Expenses | Go to Detailed_Inputs Tab |
| Expense Inflation | 3.0% |

| Retire Exp. Inflation | Exp Defl Age % Defl/yr |
|---|---|
| 100.0% | 65 |
| 3.0% | 0.0% |

| Year | Hsb Age | Wife Age | Annual Expenses | | | | |
|---|---|---|---|---|---|---|---|
| | | | Regular | Special | | | Retirement Deflation |
| | | | | Misc | Education | Medical | |
| 1 | 56 | 54 | $75,000 | $0 | $0 | $0 | 100% |
| 2 | 57 | 55 | $77,250 | $0 | $0 | $0 | 100% |
| 3 | 58 | 56 | $79,568 | $0 | $0 | $0 | 100% |
| 4 | 59 | 57 | $81,955 | $0 | $0 | $0 | 100% |
| 5 | 60 | 58 | $84,413 | $0 | $0 | $0 | 100% |
| 6 | 61 | 59 | $86,946 | $0 | $0 | $0 | 100% |
| 7 | 62 | 60 | $89,554 | $0 | $0 | $0 | 100% |
| 8 | 63 | 61 | $92,241 | $0 | $0 | $0 | 100% |
| 9 | 64 | 62 | $95,008 | $0 | $0 | $0 | 100% |
| 10 | 65 | 63 | $97,858 | $0 | $0 | $0 | 100% |
| 11 | 66 | 64 | $100,794 | $0 | $0 | $0 | 100% |
| 12 | 67 | 65 | $103,818 | $0 | $0 | $0 | 100% |

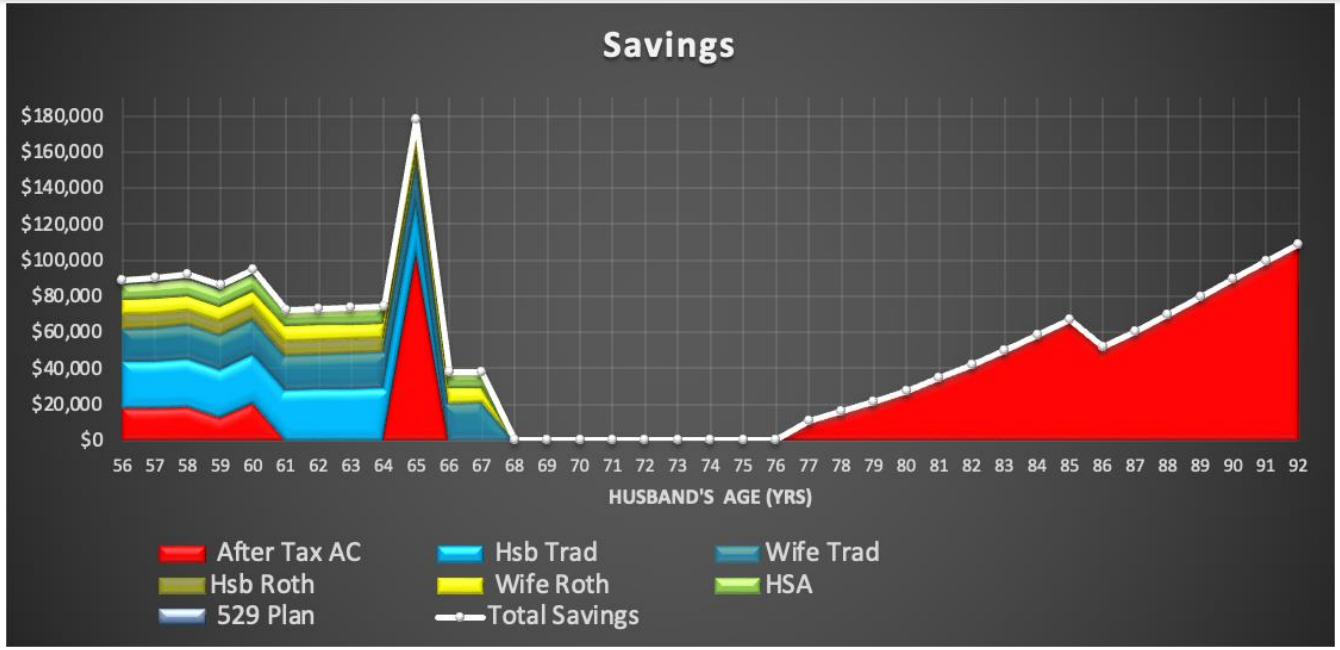



- Recurring Yearly Expenses: These are basic living expenses. Includes rent/mortgage, grocery, auto, medical, household, entertainment, utilities, insurance, travel and miscellaneous expenses. Taxes are **NOT** included – they are program calculated.
- Special Expenses: These are non-recurring, special expenses on items like kid's education, medical costs (including long term care) and miscellaneous expenses (vacations, home renovations, weddings, etc.)
- Retirement Expense: Expense in retirement is a % of pre-retirement expense
- **Expense Inflation:** This is rate of inflation. Expenses increase by this % each year
- **Expense Deflation in Retirement:** This is your expected reduction in retirement expense after a certain age. Expenses reduce each subsequent year by the % and starting age provided

# Inputs & Assumptions – *Savings*

## *Savings*

| | Husband | Wife |
|---|---|---|
| 401k Contribution | 10.0% | 15.0% |
| Company Match | 3.0% | 3.0% |
| 401k - Traditional or Roth | 1 | 1 |
| IRA Contribution | $7,000 | $7,000 |
| IRA - Traditional or Roth | 2 | 2 |
| Health Savings Account | $0 | $0 |
| 529 Plan (Amt \| Stop Age) | $0 | 0 |
| Catchup Contributions | Go to Detailed_Inputs Tab | |
| Calculated 1st Yr After Tax Svg | $25,248 | |
| **Current Savings** | | |
| Traditional 401k | $400,000 | $150,000 |
| Roth 401k | $0 | $0 |
| Traditional IRA | $50,000 | $15,000 |
| Roth IRA | $50,000 | $15,000 |
| Health Savings Account | $0 | $0 |
| 529 Plan | $0 | |
| Taxable Accounts | $100,000 | |




| Hsb 401k Catchup | Hsb IRA Catchup | Hsb HSA Catchup | Wife 401k Catchup | Wife IRA Catchup | Wife HSA Catchup |
|---|---|---|---|---|---|
| $7,500 | $1,000 | $0 | $7,500 | $1,000 | $0 |

| Year | Hsb Age | Wife Age | Annual Savings | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Husband | | | | | | | Wife | | | | | | | 529 Plan |
| | | | 401k | 401k Match | 401k Catchup | 401k - Trad/Roth | IRA | IRA - Trad/Roth | HSA | 401k | 401k Match | 401k Catchup | 401k - Trad/Roth | IRA | IRA - Trad/Roth | HSA | |
| 1 | 56 | 54 | $14,000 | $4,200 | $7,500 | 1 | $8,000 | 2 | $0 | $9,000 | $1,800 | $7,500 | 1 | $8,000 | 2 | $0 | $0 |
| 2 | 57 | 55 | $14,280 | $4,284 | $7,500 | 1 | $8,000 | 2 | $0 | $9,180 | $1,836 | $7,500 | 1 | $8,000 | 2 | $0 | $0 |
| 3 | 58 | 56 | $14,566 | $4,370 | $7,500 | 1 | $8,000 | 2 | $0 | $9,364 | $1,873 | $7,500 | 1 | $8,000 | 2 | $0 | $0 |
| 4 | 59 | 57 | $14,857 | $4,457 | $7,500 | 1 | $8,000 | 2 | $0 | $9,551 | $1,910 | $7,500 | 1 | $8,000 | 2 | $0 | $0 |
| 5 | 60 | 58 | $15,154 | $4,546 | $7,500 | 1 | $8,000 | 2 | $0 | $9,742 | $1,948 | $7,500 | 1 | $8,000 | 2 | $0 | $0 |
| 6 | 61 | 59 | $15,457 | $4,637 | $7,500 | 1 | $8,000 | 2 | $0 | $9,937 | $1,987 | $7,500 | 1 | $8,000 | 2 | $0 | $0 |
| 7 | 62 | 60 | $15,766 | $4,730 | $7,500 | 1 | $8,000 | 2 | $0 | $10,135 | $2,027 | $7,500 | 1 | $8,000 | 2 | $0 | $0 |
| 8 | 63 | 61 | $16,082 | $4,824 | $7,500 | 1 | $8,000 | 2 | $0 | $10,338 | $2,068 | $7,500 | 1 | $8,000 | 2 | $0 | $0 |
| 9 | 64 | 62 | $16,403 | $4,921 | $7,500 | 1 | $8,000 | 2 | $0 | $10,545 | $2,109 | $7,500 | 1 | $8,000 | 2 | $0 | $0 |
| 10 | 65 | 63 | $16,731 | $5,019 | $7,500 | 1 | $8,000 | 2 | $0 | $10,756 | $2,151 | $7,500 | 1 | $8,000 | 2 | $0 | $0 |
| 11 | 66 | 64 | $0 | $0 | $0 | 1 | $0 | 2 | $0 | $10,971 | $2,194 | $7,500 | 1 | $8,000 | 2 | $0 | $0 |
| 12 | 67 | 65 | $0 | $0 | $0 | 1 | $0 | 2 | $0 | $11,190 | $2,238 | $7,500 | 1 | $8,000 | 2 | $0 | $0 |

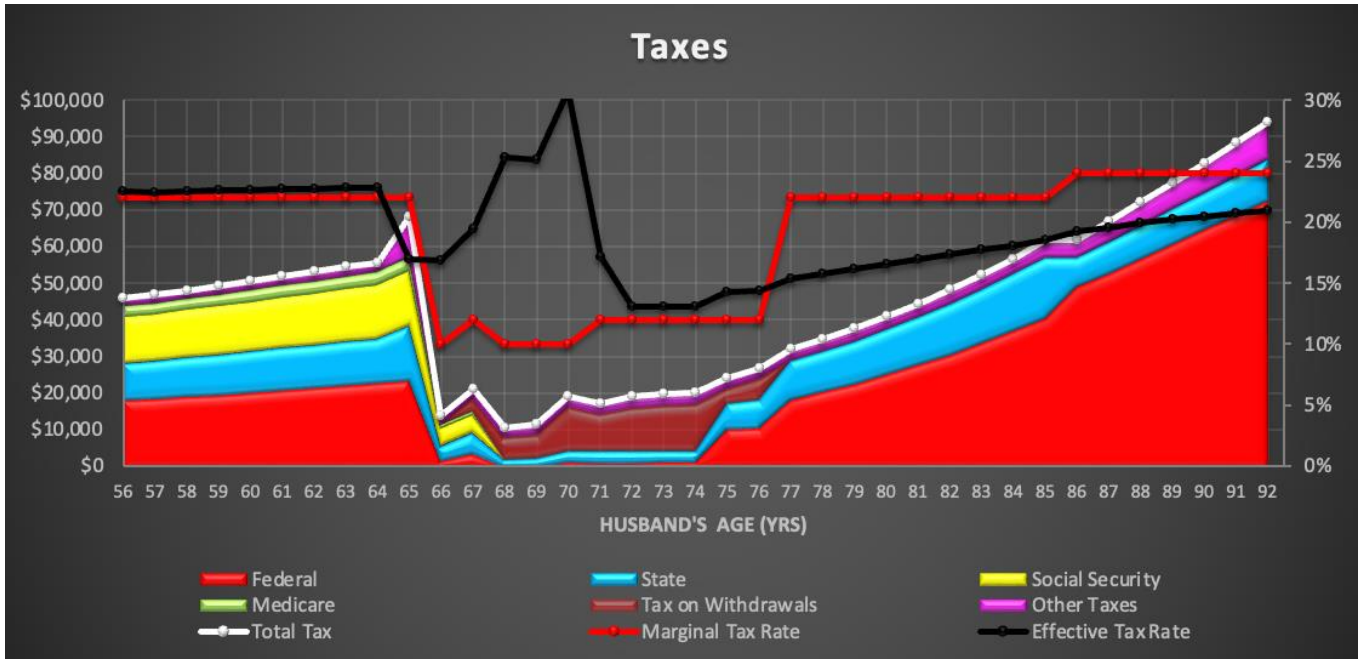
- IRA/401k: 1 = Traditional; 2 = Roth
- After Tax Savings: These are auto-calculated based on yearly income, expenses and calculated taxes. **This money is assumed to be fully invested in the Taxable account. Make sure that the amount makes sense to you.** If not, modify your expenses and re-run tool.

# Inputs & Assumptions – *Tax Calculation*

## *Tax Information*

| | | |
|---|---|---|
| Federal Tax Filing Status (S, M, H) | M | |
| Effective State and Local Tax Rate | 5% | |
| Other Taxes, Deductions & Credits | Go to Detailed_Inputs Tab | |
| Yr. 1 Eff. Tax Rate \| Marginal Tax Rate | 22.5% | 22.0% |

- Your taxes (Federal, State & Local, Social Security, Medicare, Cap Gains, Property) are calculated by the Tool based on the information provided above
- Federal Tax: S = Single, H = Head of Household, M= Married filing Jointly
- State/Local Tax: This is calculated as a % of your gross income
- Tax Tables: S = standard (current) IRS tax tables; C = your own, custom tax tables
- **Effective Tax Rate**: This is calculated as Total Tax divided Total Income (including withdrawals from traditional accounts)




| Real Estate Tax Rate | Property Tax | Charity | # of Exemption | Investment Amount | Addn'l Surtax | Use Chained CPI Index | Chained CPI Index Value | RMD Age Hsb | RMD Age Wife |
|---|---|---|---|---|---|---|---|---|---|
| 0.7% | $300 | 0.25% | 2 | $250,000 | 3.80% | 1 | 2.04% | 75 | 75 |

| Year | Hsb Age | Wife Age | Tax Tables: Std or Custom | Tax Tables: Filing Status | Itemized Deductions, Exemptions, Taxes & Credits: SALT | SALT Deduction | Real Estate Tax | Property Tax | Charity | Mortgage Interest | Misc Deductions | Std Deduction | Exemptions: # | Exemptions: Amount | Other Taxes | Tax Credits | LT Cap Gains Tax: Brkt1 | Rate1 | Brkt2 | Rate2 | Social Security: Income Level | Tax Rate | SS Tax | Medicare: Brkt1 | Rate1 | Brkt2 | Rate2 | Medicare Tax | Tax Brackets & Taxes: Brkt1 | Rate1 | Prog1 | Brkt2 | Rate2 | Prog2 | Brkt3 | Rate3 | Prog3 | Brkt4 | Rate4 | Prog4 | Brkt5 | Rate5 | Prog5 | Brkt6 | Rate6 | Prog6 | Brkt7 | Rate7 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 56 | 54 | S | M | 5.0% | $10,000 | $1,785 | $300 | $503 | $3,338 | $0 | $29,200 | 2 | $0 | $0 | $0 | $94,050 | 15% | $583,750 | 20% | $168,600 | 6.2% | $12,400 | $250,000 | 1.45% | $250,000+ | 0.90% | $2,900 | $23,200 | 10% | $2,320 | $94,300 | 12% | $10,852 | $201,050 | 22% | $34,337 | $383,900 | 24% | $78,221 | $487,450 | 32% | $111,357 | $731,200 | 35% | $196,670 | $731201+ | 37.0% |
| 2 | 57 | 55 | S | M | 5.0% | $10,000 | $1,821 | $306 | $514 | $3,042 | $0 | $29,796 | 2 | $0 | $0 | $0 | $95,969 | 15% | $595,659 | 20% | $172,039 | 6.2% | $12,648 | $250,000 | 1.45% | $250,000+ | 0.90% | $2,958 | $23,673 | 10% | $2,367 | $96,224 | 12% | $11,073 | $205,151 | 22% | $35,037 | $391,732 | 24% | $79,817 | $497,394 | 32% | $113,629 | $746,116 | 35% | $200,682 | $731201+ | 37.0% |
| 3 | 58 | 56 | S | M | 5.0% | $10,000 | $1,857 | $312 | $525 | $2,734 | $0 | $30,404 | 2 | $0 | $0 | $0 | $97,926 | 15% | $607,810 | 20% | $175,549 | 6.2% | $12,901 | $250,000 | 1.45% | $250,000+ | 0.90% | $3,017 | $24,156 | 10% | $2,416 | $98,187 | 12% | $11,299 | $209,337 | 22% | $35,752 | $399,723 | 24% | $81,445 | $507,541 | 32% | $115,947 | $761,337 | 35% | $204,775 | $731201+ | 37.0% |
| 4 | 59 | 57 | S | M | 5.0% | $10,000 | $1,894 | $318 | $536 | $2,414 | $0 | $31,024 | 2 | $0 | $0 | $0 | $99,924 | 15% | $620,209 | 20% | $179,130 | 6.2% | $13,159 | $250,000 | 1.45% | $250,000+ | 0.90% | $3,078 | $24,649 | 10% | $2,465 | $100,190 | 12% | $11,530 | $213,607 | 22% | $36,482 | $407,877 | 24% | $83,106 | $517,895 | 32% | $118,312 | $776,869 | 35% | $208,953 | $731201+ | 37.0% |
| 5 | 60 | 58 | S | M | 5.0% | $10,000 | $1,932 | $325 | $547 | $2,082 | $0 | $31,657 | 2 | $0 | $0 | $0 | $101,963 | 15% | $632,862 | 20% | $182,785 | 6.2% | $13,422 | $250,000 | 1.45% | $250,000+ | 0.90% | $3,139 | $25,152 | 10% | $2,515 | $102,234 | 12% | $11,765 | $217,965 | 22% | $37,226 | $416,198 | 24% | $84,802 | $528,460 | 32% | $120,726 | $792,717 | 35% | $213,216 | $731201+ | 37.0% |
| 6 | 61 | 59 | S | M | 5.0% | $10,000 | $1,971 | $331 | $559 | $1,738 | $0 | $32,302 | 2 | $0 | $0 | $0 | $104,043 | 15% | $645,772 | 20% | $186,513 | 6.2% | $13,691 | $250,000 | 1.45% | $250,000+ | 0.90% | $3,202 | $25,665 | 10% | $2,566 | $104,319 | 12% | $12,005 | $222,411 | 22% | $37,985 | $424,688 | 24% | $86,532 | $539,240 | 32% | $123,188 | $808,888 | 35% | $217,565 | $731201+ | 37.0% |
| 7 | 62 | 60 | S | M | 5.0% | $10,000 | $2,010 | $338 | $571 | $1,380 | $0 | $32,961 | 2 | $0 | $0 | $0 | $106,165 | 15% | $658,946 | 20% | $190,318 | 6.2% | $13,964 | $250,000 | 1.45% | $250,000+ | 0.90% | $3,266 | $26,189 | 10% | $2,619 | $106,447 | 12% | $12,250 | $226,948 | 22% | $38,760 | $433,352 | 24% | $88,297 | $550,241 | 32% | $125,701 | $825,389 | 35% | $222,003 | $731201+ | 37.0% |
| 8 | 63 | 61 | S | M | 5.0% | $10,000 | $2,050 | $345 | $583 | $1,008 | $0 | $33,634 | 2 | $0 | $0 | $0 | $108,331 | 15% | $672,388 | 20% | $194,201 | 6.2% | $14,244 | $250,000 | 1.45% | $250,000+ | 0.90% | $3,331 | $26,723 | 10% | $2,672 | $108,619 | 12% | $12,500 | $231,578 | 22% | $39,551 | $442,192 | 24% | $90,098 | $561,466 | 32% | $128,266 | $842,227 | 35% | $226,532 | $731201+ | 37.0% |
| 9 | 64 | 62 | S | M | 5.0% | $10,000 | $2,091 | $351 | $596 | $623 | $0 | $34,320 | 2 | $0 | $0 | $0 | $110,541 | 15% | $686,105 | 20% | $198,162 | 6.2% | $14,529 | $250,000 | 1.45% | $250,000+ | 0.90% | $3,398 | $27,268 | 10% | $2,727 | $110,835 | 12% | $12,755 | $236,302 | 22% | $40,358 | $451,213 | 24% | $91,936 | $572,920 | 32% | $130,882 | $859,409 | 35% | $231,154 | $731201+ | 37.0% |
| 10 | 65 | 63 | S | M | 5.0% | $10,000 | $2,133 | $359 | $608 | $223 | $0 | $35,020 | 2 | $0 | $0 | $0 | $112,796 | 15% | $700,101 | 20% | $202,205 | 6.2% | $14,819 | $250,000 | 1.45% | $250,000+ | 0.90% | $3,466 | $27,824 | 10% | $2,782 | $113,096 | 12% | $13,015 | $241,123 | 22% | $41,181 | $460,418 | 24% | $93,812 | $584,607 | 32% | $133,552 | $876,941 | 35% | $235,869 | $731201+ | 37.0% |
| 11 | 66 | 64 | S | M | 5.0% | $10,000 | $2,176 | $366 | $183 | $0 | $0 | $35,734 | 2 | $0 | $0 | $0 | $115,097 | 15% | $714,383 | 20% | $206,330 | 6.2% | $4,535 | $250,000 | 1.45% | $250,000+ | 0.90% | $1,061 | $28,392 | 10% | $2,839 | $115,403 | 12% | $13,280 | $246,042 | 22% | $42,021 | $469,810 | 24% | $95,726 | $596,533 | 32% | $136,277 | $894,830 | 35% | $240,681 | $731201+ | 37.0% |
| 12 | 67 | 65 | S | M | 5.0% | $10,000 | $2,219 | $373 | $253 | $0 | $0 | $36,463 | 2 | $0 | $0 | $0 | $117,445 | 15% | $728,957 | 20% | $210,539 | 6.2% | $4,625 | $250,000 | 1.45% | $250,000+ | 0.90% | $1,082 | $28,971 | 10% | $2,897 | $117,757 | 12% | $13,551 | $251,061 | 22% | $42,878 | $479,395 | 24% | $97,678 | $608,702 | 32% | $139,057 | $913,085 | 35% | $245,591 | $731201+ | 37.0% |


**CAUTION**: Created by an engineer; not financial, tax, or legal advice. Projections are estimates based on user data and do not guarantee future results; consult a licensed professional before taking action

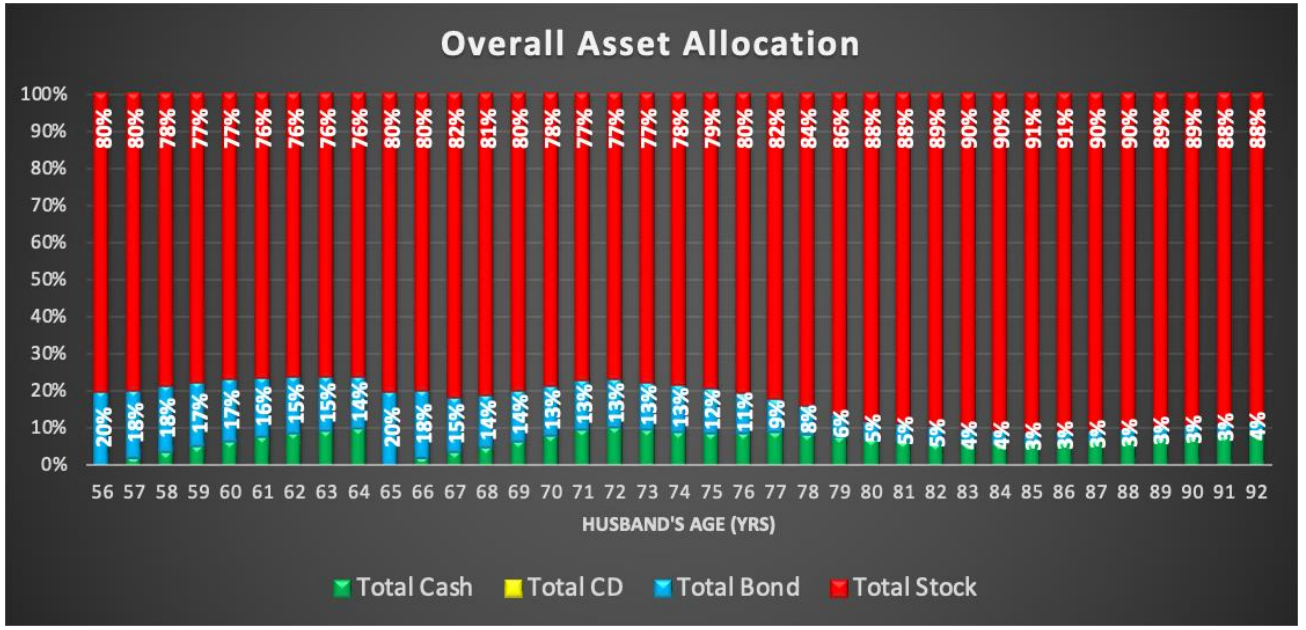
# Inputs & Assumptions – *Asset Allocation*

## *Asset Allocation*

| All Accounts | Stocks | Bonds | CD's | Cash | Rebal? |
|---|---|---|---|---|---|
| Taxable Accounts | 80% | 20% | 0% | 0% | 0 |
| Pre Tax Accounts | 80% | 20% | 0% | 0% | 0 |
| In Retirement | Retirement Asset Allocation | | | | |
| **All Accounts** | **Stocks** | **Bonds** | **CD's** | **Cash** | **Rebal?** |
| Taxable Accounts | 80% | 20% | 0% | 0% | 0 |
| Pre Tax Accounts | 80% | 20% | 0% | 0% | 0 |

| Account | Cash | CDs | Bonds | Stocks | Total |
|---|---|---|---|---|---|
| After Tax AC | $0 | $0 | $20,000 | $80,000 | $100,000 |
| Hsb Traditional AC | $0 | $0 | $90,000 | $360,000 | $450,000 |
| Wife Traditional AC | $0 | $0 | $33,000 | $132,000 | $165,000 |
| Hsb Roth AC | $0 | $0 | $10,000 | $40,000 | $50,000 |
| Wife Roth AC | $0 | $0 | $3,000 | $12,000 | $15,000 |
| HSA AC | $0 | $0 | $8,000 | $32,000 | $40,000 |
| 529 Plan AC | $0 | $0 | $16,000 | $64,000 | $80,000 |
| **Total - All AC** | **$0** | **$0** | **$180,000** | **$720,000** | **$900,000** |
| | **0%** | **0%** | **20%** | **80%** | **100%** |

**Summary of your Current Account Balances and Asset Allocation**




- Asset Allocation: These are the 4 asset allocation categories for your investment accounts. They represent "high risk", "low risk", "short-term" and "cash" type investment options
- Rebalancing: These are the rebalancing options you have chosen for your investment accounts. 1 = annual rebalancing, 0 = no annual rebalancing
- Life Modeling: Any changes you made to your pre & post retirement asset allocation and re-balancing for each of your accounts (to model your specific situation) are shown in the summary table below

**Asset Allocation, Re-balancing & Re-investing**

| Year | Hsb Age | Wife Age | Roth 401k / Pre Tax Accounts | | | | | | Husband Traditional 401k/IRA | | | | | | Wife Traditional 401k/IRA | | | | | | Husband Roth 401k/IRA | | | | | | Wife Roth 401k/IRA | | | | | | HSA | | | | | | 529 Plan | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Stocks | Bonds | CDs | Cash | Re-balance | Re-invest Dividends | Stocks | Bonds | CDs | Cash | Re-balance | Re-invest Dividends | Stocks | Bonds | CDs | Cash | Re-balance | Re-invest Dividends | Stocks | Bonds | CDs | Cash | Re-balance | Re-invest Dividends | Stocks | Bonds | CDs | Cash | Re-balance | Re-invest Dividends | Stocks | Bonds | CDs | Cash | Re-balance | Re-invest Dividends | Stocks | Bonds | CDs | Cash | Re-balance | Re-invest Dividends |
| 1 | 56 | 54 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 |
| 2 | 57 | 55 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 |
| 3 | 58 | 56 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 |
| 4 | 59 | 57 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 |
| 5 | 60 | 58 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 |
| 6 | 61 | 59 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 |
| 7 | 62 | 60 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 |
| 8 | 63 | 61 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 |
| 9 | 64 | 62 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 |
| 10 | 65 | 63 | 80% | 20% | 0% | 0% | 1 | 0 | 80% | 20% | 0% | 0% | 1 | 0 | 80% | 20% | 0% | 0% | 1 | 0 | 80% | 20% | 0% | 0% | 1 | 0 | 80% | 20% | 0% | 0% | 1 | 0 | 80% | 20% | 0% | 0% | 1 | 0 | 80% | 20% | 0% | 0% | 1 | 0 |
| 11 | 66 | 64 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 |
| 12 | 67 | 65 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 | 80% | 20% | 0% | 0% | 0 | 0 |

# Inputs & Assumptions – *Rate of Return*

## *Rate of Return*

| Account | Stocks | Bonds | CD's | Cash | Re-Inv Dividends? | |
|---|---|---|---|---|---|---|
| Compounding Rate of Return | 6.0% | 1.0% | 0.0% | 0.0% | 0 | Before Retire |
| Dividend Yield | 2.0% | 3.5% | 2.5% | 0.1% | 0 | In Retirement |

| Year | Hsb Age | Wife Age | Stock Rate of Return | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | After Tax | Trad 401k | Trad IRA | Roth 401k | Roth IRA | HSA | 529 Plan |
| 1 | 56 | 54 | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% |
| 2 | 57 | 55 | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% |
| 3 | 58 | 56 | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% |
| 4 | 59 | 57 | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% |
| 5 | 60 | 58 | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% |
| 6 | 61 | 59 | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% |
| 7 | 62 | 60 | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% |
| 8 | 63 | 61 | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% |
| 9 | 64 | 62 | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% |
| 10 | 65 | 63 | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% |
| 11 | 66 | 64 | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% |
| 12 | 67 | 65 | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% |

- Rate of Return: This is your assumed rate of return for each types of investment vehicle. **It is important that reasonable, market-based returns be used** to get meaningful net worth projections. Unrealistic rate of return assumptions will lead to unattainable financial goals.
- Re-investing Dividends: Dividends can be re-invested or distributed as cash. 0 = do not reinvest; 1 = reinvest dividend
- Sample Portfolios: across the risk/reward spectrum have been provided, along with appropriate rates of return and dividend yields to use for portfolio projections
- There are no separate entries for pre and post retirement returns. This is because investment returns depend on the investment vehicle only. Risk mitigation in retirement is done by appropriate asset allocation amongst the investment classes.
- Life Modeling: Rate of return is **not a controllable parameter and cannot be changed**. Black swan type events/impact of recessions, etc. can be simulated by running the historical sequence of returns macro

# Inputs & Assumptions – *Non-Liquid Assets*

## *Non-Liquid Assets*

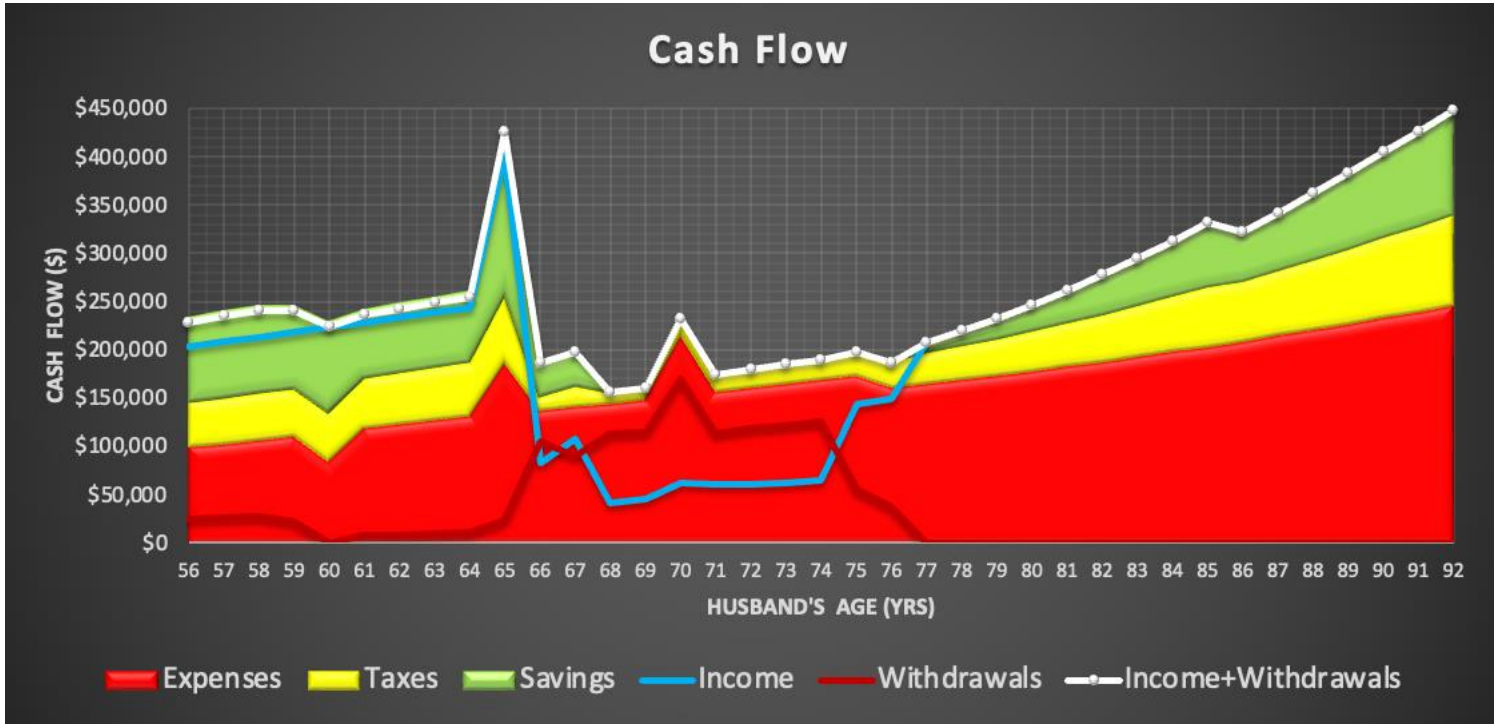
| | Personal Home | |
|---|---|---|
| Today's Value of Your Home | $250,000 | |
| Loan Amount | $200,000 | |
| Term | 30 | |
| Interest Rate | 3.75% | |
| Term Remaining | 10 | |
| Appreciation | 2.0% | |
| Today's Home Equity | $157,434 | |
| Yearly Mortgage Interest \| Monthly Payment | $3,338 | $926 |
| | Rental Property | |
| Current Value of Rental Property | $0 | |
| Buy Price of Rental Property | $0 | |
| Loan Amount | $0 | |
| Term | 0 | |
| Interest Rate | 0.00% | |
| Term Remaining | 0 | |
| Appreciation | 0.0% | |
| Rent per Year | $0 | |
| Yearly Increase in Rent | 0.0% | |
| Expenses per Year | $0 | |
| Yearly Mortgage Interest \| Monthly Payment | #NUM! | $0 |
| Yearly Increase in Expenses | 0.0% | |
| Depreciation | 27.5 | |
| Sell Property at Age | 0 | |
| Today's Equity | #NUM! | |
| Yearly Rental Income | $0 | |
| | Business Property | |
| Business Equity Today | $0 | |
| Buy Price of Business | $0 | |
| Annual Appreciation | 0.0% | |
| Sell Business at Age | 65 | |

- Personal Home: Information on your personal home is used to calculate your Total Net Worth
- Rental Property: If you have rental property, the Tool calculates yearly rental income and capital gains when you sell the property
- Business: For users with business income, the Tool calculates the capital gains when business is sold
- Life Modeling – Not applicable for non-liquid assets

# CASH FLOW ANALYSIS

- **Cash Flow Analysis** gives you information on your Money Flow. It balances your Income and Withdrawals (in retirement) against your Expenses, Taxes and Savings of leftover income
- **Pie Charts** provide you detailed information on Income, Withdrawals, Expenses, Taxes & Savings in any given year of your life
- **Use** Cash Flow Analysis data to increase **awareness and control of your finances**. **Adjust your expenses and savings** to meet your retirement goals

# Cash Flow Analysis – *Over Lifetime*

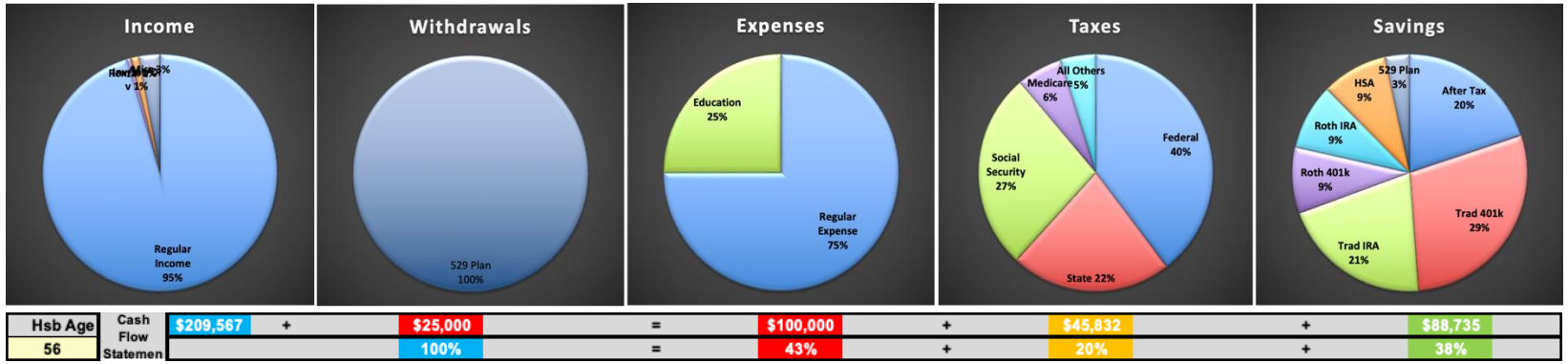



This is how your income, expenses, taxes, savings and withdrawals evolve over your lifetime

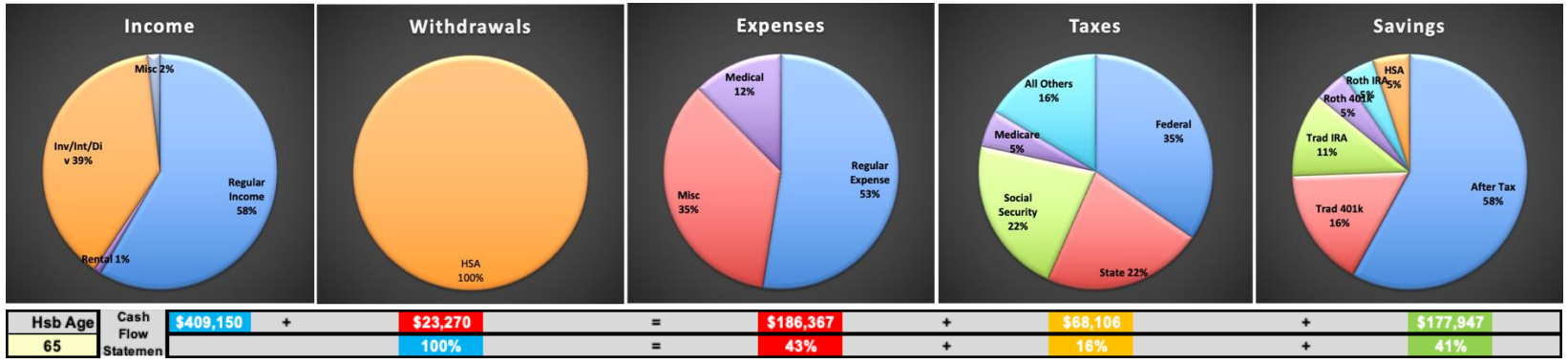
| Hsb Age | Expenses | Taxes | Savings | Income | Withdrawals | Income+Withdrawals |
|---|---|---|---|---|---|---|
| 56 | $100,000 | $45,832 | $88,735 | $203,567 | $25,000 | $228,567 |
| 57 | $103,500 | $46,790 | $90,370 | $208,290 | $26,250 | $234,540 |
| 58 | $107,130 | $48,018 | $91,872 | $213,215 | $27,563 | $240,778 |
| 59 | $110,895 | $49,279 | $86,035 | $218,278 | $21,564 | $239,842 |
| 60 | $84,413 | $50,533 | $94,859 | $223,310 | $0 | $223,310 |
| 61 | $118,853 | $51,863 | $72,118 | $228,653 | $7,556 | $236,210 |
| 62 | $123,056 | $53,107 | $72,759 | $233,643 | $8,522 | $242,165 |
| 63 | $127,418 | $54,377 | $73,412 | $238,740 | $9,574 | $248,314 |
| 64 | $131,944 | $55,675 | $74,078 | $243,951 | $10,716 | $254,667 |
| 65 | $186,367 | $68,106 | $177,947 | $401,979 | $23,270 | $425,249 |
| 66 | $137,658 | $13,815 | $37,765 | $82,178 | $104,866 | $187,044 |
| 67 | $141,239 | $21,034 | $38,028 | $108,236 | $89,827 | $198,063 |
| 68 | $144,920 | $10,633 | $0 | $41,948 | $113,604 | $155,552 |
| 69 | $148,705 | $11,458 | $0 | $45,557 | $114,606 | $160,162 |
| 70 | $213,100 | $18,968 | $0 | $61,597 | $170,471 | $232,068 |
| 71 | $156,600 | $17,250 | $0 | $60,444 | $113,407 | $173,851 |
| 72 | $160,718 | $18,947 | $0 | $61,163 | $118,503 | $179,666 |
| 73 | $164,955 | $19,621 | $0 | $62,666 | $121,910 | $184,576 |
| 74 | $169,315 | $20,027 | $0 | $64,232 | $125,109 | $189,342 |
| 75 | $173,801 | $24,159 | $0 | $143,214 | $54,745 | $197,960 |
| 76 | $160,357 | $26,835 | $0 | $149,614 | $37,578 | $187,193 |
| 77 | $164,569 | $31,901 | $10,792 | $207,262 | $0 | $207,262 |
| 78 | $168,905 | $34,647 | $15,764 | $219,315 | $0 | $219,315 |
| 79 | $173,369 | $37,636 | $21,316 | $232,320 | $0 | $232,320 |
| 80 | $177,967 | $40,886 | $27,494 | $246,347 | $0 | $246,347 |
| 81 | $182,703 | $44,402 | $34,312 | $261,418 | $0 | $261,418 |
| 82 | $187,583 | $48,186 | $41,768 | $277,537 | $0 | $277,537 |
| 83 | $192,611 | $52,238 | $49,866 | $294,715 | $0 | $294,715 |
| 84 | $197,794 | $56,553 | $58,584 | $312,931 | $0 | $312,931 |
| 85 | $203,136 | $61,776 | $67,265 | $332,177 | $0 | $332,177 |
| 86 | $208,644 | $61,823 | $51,491 | $321,958 | $0 | $321,958 |
| 87 | $214,325 | $66,854 | $60,507 | $341,686 | $0 | $341,686 |
| 88 | $220,185 | $72,048 | $69,890 | $362,123 | $0 | $362,123 |
| 89 | $226,231 | $77,367 | $79,557 | $383,155 | $0 | $383,155 |
| 90 | $232,470 | $82,794 | $89,374 | $404,638 | $0 | $404,638 |
| 91 | $238,910 | $88,354 | $99,125 | $426,388 | $0 | $426,388 |
| 92 | $245,558 | $93,853 | $108,770 | $448,181 | $0 | $448,181 |


**CAUTION**: Created by an engineer; not financial, tax, or legal advice. Projections are estimates based on user data and do not guarantee future results; consult a licensed professional before taking action

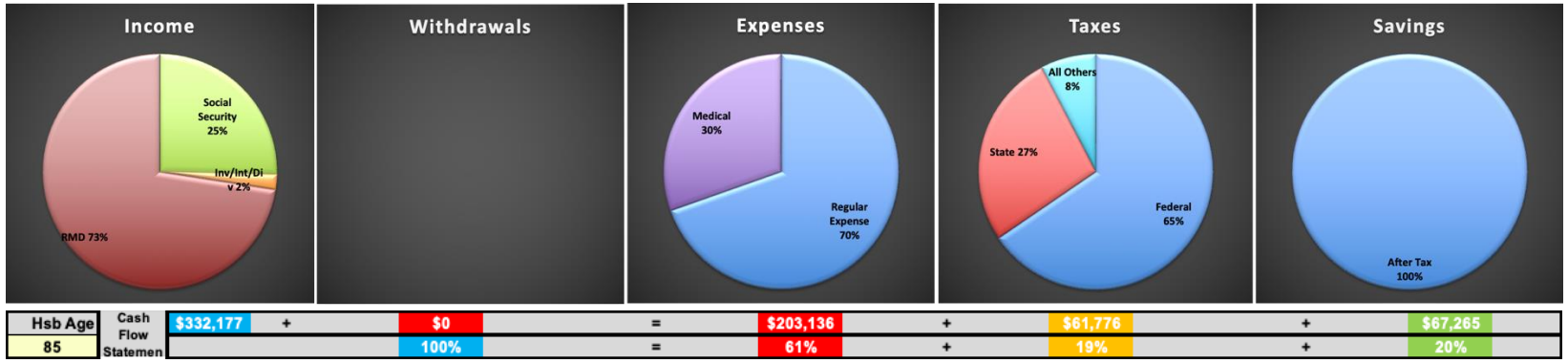
# Cash Flow Analysis – *By Year*




| Hsb Age | Cash Flow Statemen | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 56 | | $209,567 | + | $25,000 | = | $100,000 | + | $45,832 | + | $88,735 | | |
| | | | | 100% | = | 43% | + | 20% | + | 38% | | |




| Hsb Age | Cash Flow Statemen | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 65 | | $409,150 | + | $23,270 | = | $186,367 | + | $68,106 | + | $177,947 | | |
| | | | | 100% | = | 43% | + | 16% | + | 41% | | |




| Hsb Age | Cash Flow Statemen | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 85 | | $332,177 | + | $0 | = | $203,136 | + | $61,776 | + | $67,265 | | |
| | | | | 100% | = | 61% | + | 19% | + | 20% | | |

- The **Cash Flow Analysis** and pie plots gives you information on Money Flow. It tells you where your money is coming from (income or withdrawals from your savings accounts) and where it is going (expenses, taxes or savings)
- **Pie Charts** provide a detailed assessment of cash flow by year.
- Look at how your **sources of income** change over the years; when you **start making withdrawals** and how **RMD** kicks in
- See how your **expenses change over time** including **special expenses** for education, medical and other purposes
- **See how much and which taxes** you are paying
- See how much you are **saving each year** and to which accounts
- And finally…. See what **percentage of your total income goes towards expenses, taxes and savings**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# NET WORTH ASSESSMENT

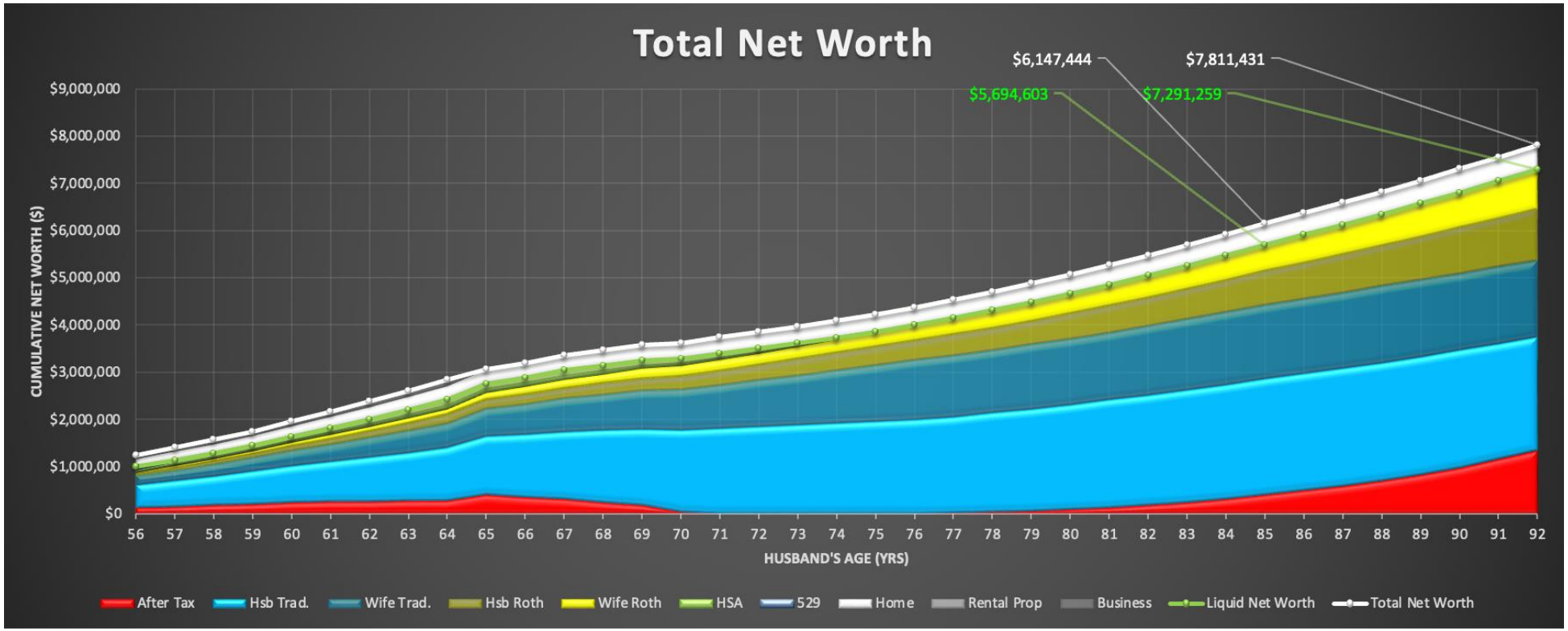
- **Net Worth Assessment** gives you information on your Liquid & Total Net Worth (including Non-Liquid assets).
- **Observe** how your net worth changes over your lifetime. **Pie Charts** provide you a detailed breakdown of your account balances and how they change in different stages of your life
- Find the answer to your **two main questions – Can I Retire at Desired Age? And Will I Run Out of Money in Retirement?**
- **Carefully review** your net worth calculation using the **Fixed Rate of Return** assumption and the **likelihood of meeting retirement goals** using **Monte Carlo** and **Historical S&P 500 Index Sequence of Return Simulations**

# Net Worth – *Fixed Rate of Return*

| RESULTS | Husband | Wife | Estate Plan/ Target |
|---|---|---|---|
| Can you Retire at Desired Age? | YES | YES | |
| Liquid Net Worth at Life Expectancy Age | $5,694,603 | $7,291,259 | $1,000,000 |
| otal Net Worth ($+Prop.) at Life Exp. Age | $6,147,444 | $7,811,431 | |

This is your **Net Worth** and if you can retire at your desired age without running out of money **based on a Fixed Rate of Return**

**A positive number does NOT guarantee success**




**Note**: A "typical" Net Worth Statement lists Assets & Liabilities. Here we simply assume that you will pay down your Liabilities (house & car loans, credit card debt, etc.) over your lifetime. Personal home, rental property & business equity are included in the Total Net Worth calculation, but assets like your car, jewelry, personal belongings, etc. are NOT included

- ***Fixed Rate of Return*** assumes a constant rate of return each year for each type of investment in all user accounts
- **This projection may not be realistic** because market returns change significantly each year. The rate of return assumptions generally hold true over long periods of time; this projection shows what your net worth, **on average**, will be over a long period of time
- **If you are close to retirement**, a significant market downturn can negatively impact your ability meet your life expectancy and estate plan goals
- A **Monte Carlo Simulation** that accounts for market uncertainty is a much better predictor of the robustness of your financial plan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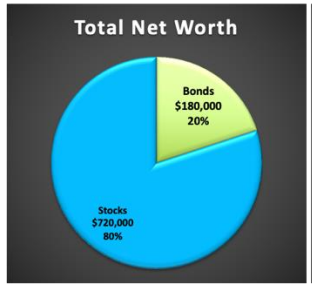
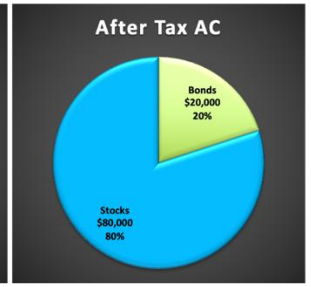
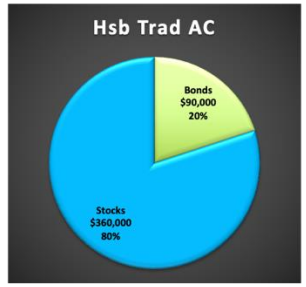
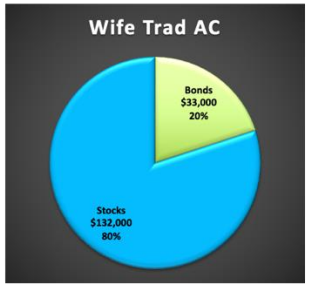
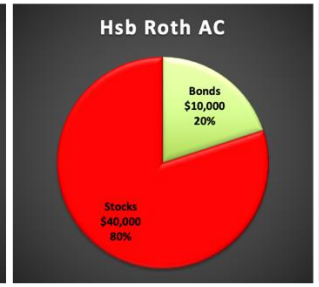
# Net Worth Analysis – *By Year*

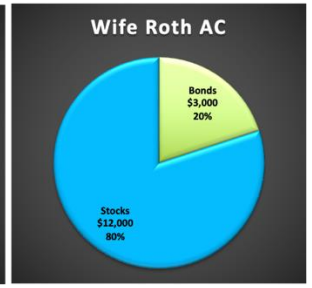


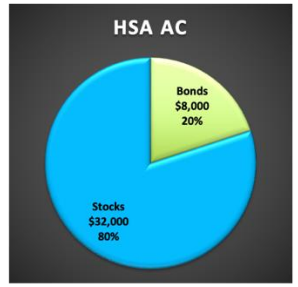



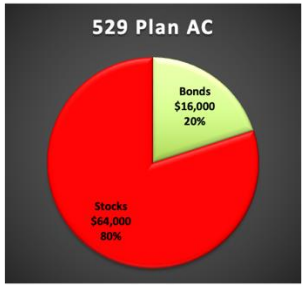



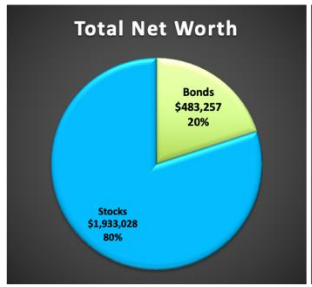



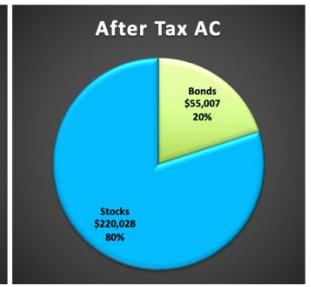



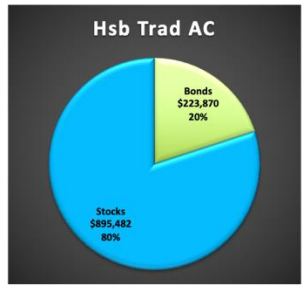



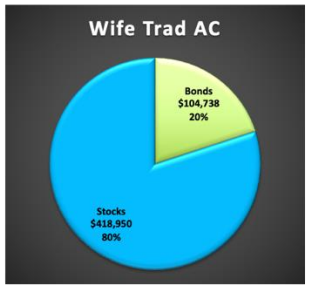



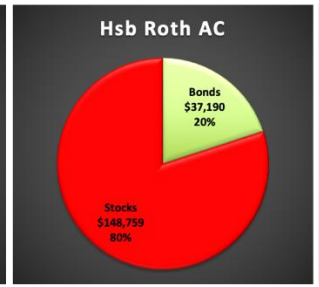

| Hsb Age | Net Worth Statement | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 56 | $900,000 | = | $100,000 | + | $450,000 | + | $165,000 | + | $50,000 | + | $15,000 | + | $40,000 | + | $80,000 |
| | 100% | = | 11% | + | 50% | + | 18% | + | 6% | + | 2% | + | 4% | + | 9% |

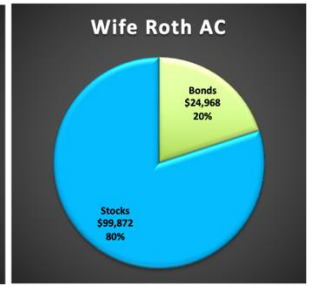


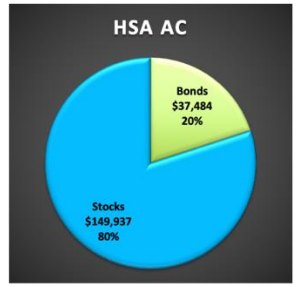



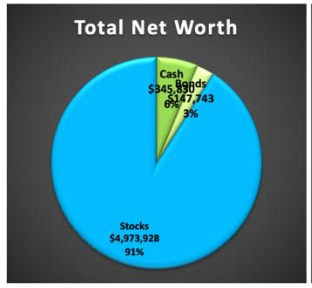



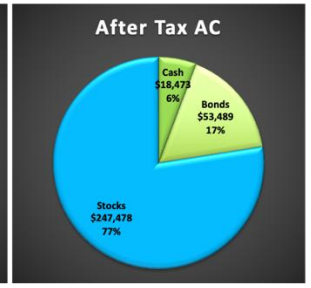



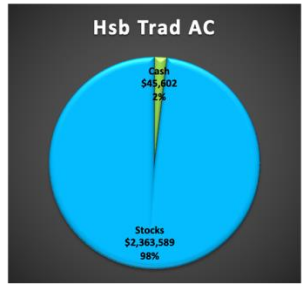



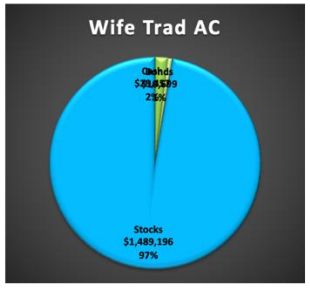

529 Plan AC

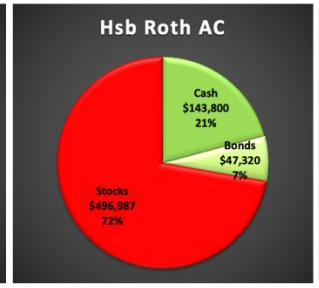
| Hsb Age | Net Worth Statement | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 65 | $2,416,285 | = | $275,035 | + | $1,119,352 | + | $523,688 | + | $185,949 | + | $124,840 | + | $187,422 | + | $0 |
| | 100% | = | 11% | + | 46% | + | 22% | + | 8% | + | 5% | + | 8% | + | 0% |

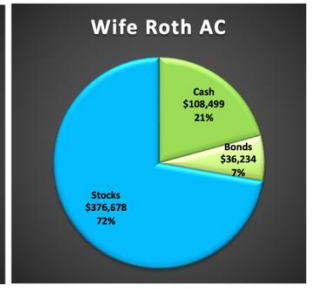



HSA AC

529 Plan AC

| Hsb Age | Net Worth Statement | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 85 | $5,467,501 | = | $319,440 | + | $2,409,191 | + | $1,529,352 | + | $688,107 | + | $521,410 | + | $0 | + | $0 |
| | 100% | = | 6% | + | 44% | + | 28% | + | 13% | + | 10% | + | 0% | + | 0% |

The **Net Worth Analysis** by year shows how your Net Worth and Asset Allocation change over the years. It also shows a breakdown of balances in each of your investment accounts

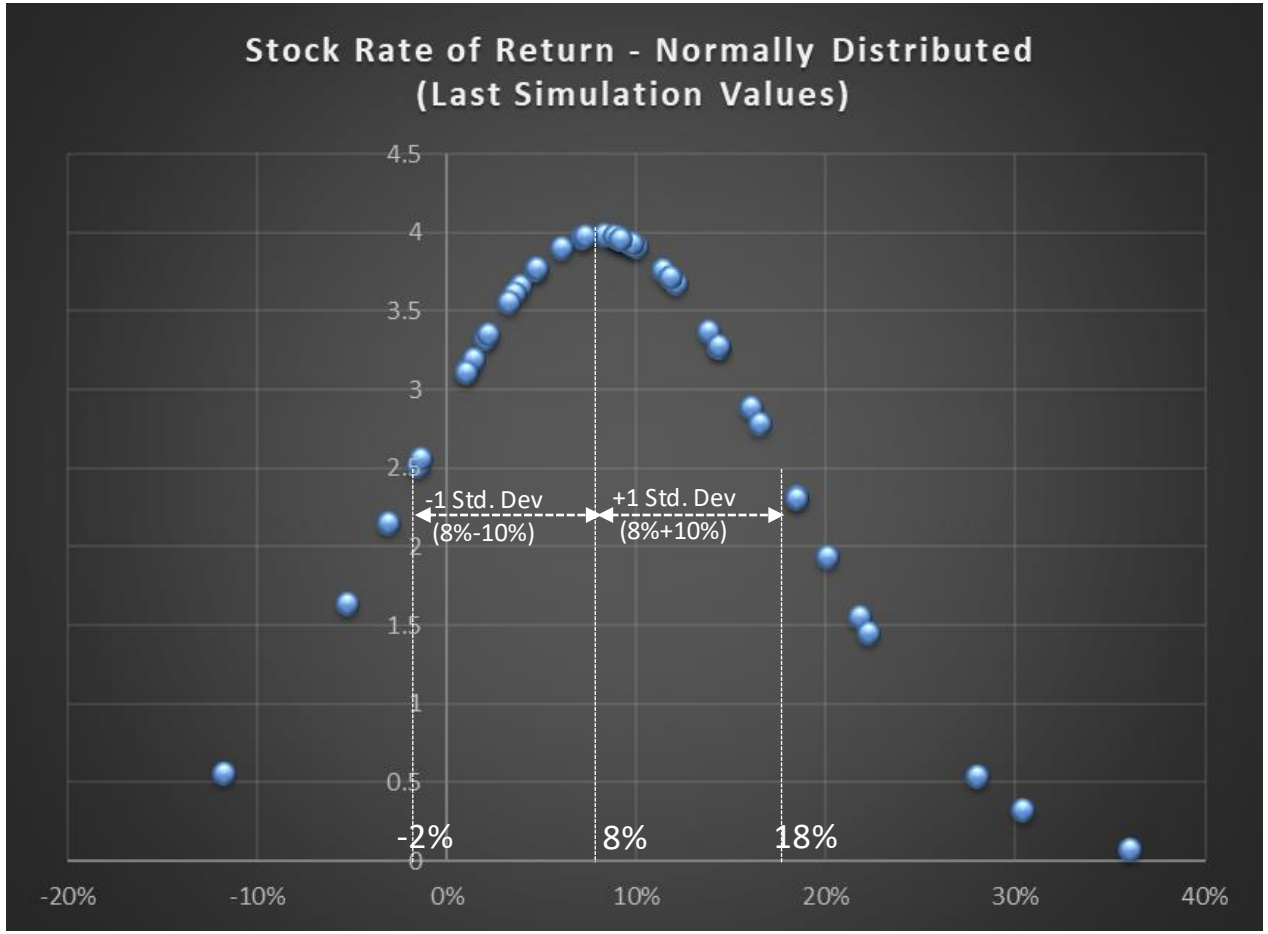
 **CAUTION**: Created by an engineer; not financial, tax, or legal advice. Projections are estimates based on user data and do not guarantee future results; consult a licensed professional before taking action 

# Net Worth Analysis – *By Year*

| Hsb Age | After Tax AC | Hsb Trad | Wife Trad | Hsb Roth | Wife Roth | HSA | 529 Plan | Home Equity | Rental Equity | Business Equity | Liquid Net Worth | Total Net Worth |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 56 | $121,033 | $490,215 | $188,751 | $59,687 | $23,587 | $51,532 | $60,162 | $170,210 | $74,242 | $0 | $994,967 | $1,239,419 |
| 57 | $147,974 | $552,184 | $221,382 | $72,225 | $33,546 | $64,993 | $40,805 | $183,383 | $81,863 | $0 | $1,133,109 | $1,398,355 |
| 58 | $177,646 | $618,374 | $256,354 | $85,591 | $44,195 | $79,354 | $18,564 | $196,966 | $89,728 | $0 | $1,280,076 | $1,566,770 |
| 59 | $202,618 | $689,036 | $293,804 | $99,831 | $55,571 | $94,665 | $0 | $210,973 | $97,846 | $0 | $1,435,524 | $1,744,343 |
| 60 | $237,657 | $764,437 | $333,879 | $114,994 | $67,714 | $110,979 | $3,100 | $225,417 | $106,226 | $0 | $1,632,760 | $1,964,403 |
| 61 | $249,476 | $844,861 | $376,735 | $131,131 | $80,666 | $128,350 | $0 | $240,315 | $114,876 | $0 | $1,811,220 | $2,166,411 |
| 62 | $258,119 | $930,606 | $422,537 | $148,297 | $94,473 | $146,839 | $0 | $255,681 | $123,806 | $0 | $2,000,871 | $2,380,358 |
| 63 | $266,651 | $1,021,991 | $471,460 | $166,549 | $109,181 | $166,507 | $0 | $271,531 | $133,026 | $0 | $2,202,339 | $2,606,896 |
| 64 | $275,035 | $1,119,352 | $523,688 | $185,949 | $124,840 | $187,422 | $0 | $287,881 | $142,545 | $0 | $2,416,285 | $2,846,711 |
| 65 | $401,756 | $1,231,295 | $583,007 | $207,791 | $142,221 | $187,118 | $0 | $304,749 | $0 | $0 | $2,753,187 | $3,057,936 |
| 66 | $348,693 | $1,319,595 | $646,178 | $222,694 | $160,691 | $186,062 | $0 | $310,844 | $0 | $0 | $2,883,914 | $3,194,757 |
| 67 | $309,652 | $1,412,670 | $713,429 | $238,404 | $180,312 | $183,977 | $0 | $317,060 | $0 | $0 | $3,038,443 | $3,355,504 |
| 68 | $244,303 | $1,510,804 | $763,093 | $254,967 | $192,879 | $170,612 | $0 | $323,402 | $0 | $0 | $3,136,657 | $3,460,059 |
| 69 | $174,128 | $1,614,292 | $815,467 | $272,434 | $206,132 | $154,791 | $0 | $329,870 | $0 | $0 | $3,237,244 | $3,567,114 |
| 70 | $41,946 | $1,723,452 | $870,710 | $290,858 | $220,110 | $136,251 | $0 | $336,467 | $0 | $0 | $3,283,327 | $3,619,795 |
| 71 | $1,724 | $1,798,139 | $928,990 | $310,296 | $234,857 | $114,702 | $0 | $343,196 | $0 | $0 | $3,388,708 | $3,731,904 |
| 72 | $56 | $1,834,740 | $990,488 | $330,808 | $250,418 | $89,829 | $0 | $350,060 | $0 | $0 | $3,496,338 | $3,846,398 |
| 73 | $2 | $1,873,619 | $1,055,393 | $352,456 | $266,841 | $61,289 | $0 | $357,062 | $0 | $0 | $3,609,600 | $3,966,661 |
| 74 | $0 | $1,916,989 | $1,123,908 | $375,310 | $284,176 | $28,705 | $0 | $364,203 | $0 | $0 | $3,729,088 | $4,093,291 |
| 75 | $0 | $1,951,947 | $1,196,246 | $399,438 | $302,479 | $0 | $0 | $371,487 | $0 | $0 | $3,850,111 | $4,221,598 |
| 76 | $0 | $1,975,665 | $1,272,634 | $424,919 | $321,807 | $0 | $0 | $378,917 | $0 | $0 | $3,995,024 | $4,373,941 |
| 77 | $11,153 | $2,037,554 | $1,301,943 | $451,831 | $342,219 | $0 | $0 | $386,495 | $0 | $0 | $4,144,700 | $4,531,195 |
| 78 | $28,252 | $2,099,185 | $1,332,384 | $480,259 | $363,781 | $0 | $0 | $394,225 | $0 | $0 | $4,303,860 | $4,698,085 |
| 79 | $52,311 | $2,160,144 | $1,363,934 | $510,293 | $386,560 | $0 | $0 | $402,109 | $0 | $0 | $4,473,242 | $4,875,351 |
| 80 | $84,460 | $2,219,020 | $1,396,560 | $542,029 | $410,629 | $0 | $0 | $410,151 | $0 | $0 | $4,652,698 | $5,062,850 |
| 81 | $125,914 | $2,274,142 | $1,430,218 | $575,569 | $436,066 | $0 | $0 | $418,355 | $0 | $0 | $4,841,908 | $5,260,263 |
| 82 | $177,965 | $2,324,743 | $1,464,227 | $611,018 | $462,949 | $0 | $0 | $426,722 | $0 | $0 | $5,040,903 | $5,467,625 |
| 83 | $241,993 | $2,370,036 | $1,497,450 | $648,491 | $491,367 | $0 | $0 | $435,256 | $0 | $0 | $5,249,336 | $5,684,592 |
| 84 | $319,440 | $2,409,191 | $1,529,352 | $688,107 | $521,410 | $0 | $0 | $443,961 | $0 | $0 | $5,467,501 | $5,911,462 |
| 85 | $411,163 | $2,441,350 | $1,558,920 | $729,996 | $553,175 | $0 | $0 | $452,840 | $0 | $0 | $5,694,603 | $6,147,444 |
| 86 | $492,826 | $2,465,634 | $1,584,670 | $774,291 | $586,764 | $0 | $0 | $461,897 | $0 | $0 | $5,904,185 | $6,366,082 |
| 87 | $589,215 | $2,481,156 | $1,605,823 | $821,136 | $622,286 | $0 | $0 | $471,135 | $0 | $0 | $6,119,616 | $6,590,751 |
| 88 | $701,680 | $2,487,040 | $1,621,796 | $870,684 | $659,856 | $0 | $0 | $480,558 | $0 | $0 | $6,341,056 | $6,821,614 |
| 89 | $831,573 | $2,482,440 | $1,632,006 | $923,094 | $699,597 | $0 | $0 | $490,169 | $0 | $0 | $6,568,710 | $7,058,879 |
| 90 | $980,183 | $2,466,564 | $1,635,876 | $978,539 | $741,637 | $0 | $0 | $499,972 | $0 | $0 | $6,802,799 | $7,302,771 |
| 91 | $1,148,653 | $2,438,705 | $1,632,850 | $1,037,198 | $786,113 | $0 | $0 | $509,972 | $0 | $0 | $7,043,520 | $7,553,492 |
| 92 | $1,338,146 | $2,398,269 | $1,622,408 | $1,099,264 | $833,172 | $0 | $0 | $520,171 | $0 | $0 | $7,291,259 | $7,811,431 |

The **Net Worth Analysis** by year shows how your Net Worth and Asset Allocation change over the years. It also shows a breakdown of balances in each of your investment accounts

# Net Worth – *Monte Carlo Simulation Method*




A "typical" set of randomly selected rate of return values (based on a normal distribution) are used in a single Monte Carlo simulation (for each year of your life starting now to your life expectancy age)

| Type of Simulation | Norm Dist |
|---|---|
| # of Simulations | 1,000 |
| Standard Deviation | 10% |

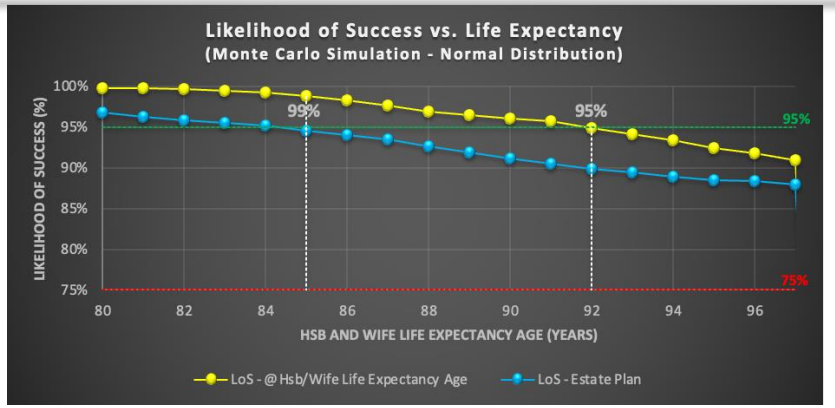
- **Monte Carlo Simulations** quantify the risk and uncertainty associated with market returns each year
- **The "variation" in market returns is quantified by a "standard deviation"** that signifies how much the rate of return will fluctuate from the average. A high value implies a large variation in market returns year-to-year
- **A "normal distribution" (shown in the graph) is used to estimate the stock rate of return for each year** of your financial lifecycle.
- **A total of 1000 simulations are run** to calculate the likelihood of success rate in meeting your retirement goals
- **In simulation #1** the program will pick a random stock rate of return "dot" from the normal distribution and apply it to the husband's current year. This will be repeated for each year upto life expectancy age. The liquid net worth is then calculated for this set of "lifetime" market returns for this 1st simulation
- **This process is repeated a 1000 times** and the liquid net worth is calculated for each of the 1000 simulations. From this, **the program calculates how many simulations were successful** i.e. husband and wife do not run out of money at their life expectancy age…. **A probability of success is calculated from this**.

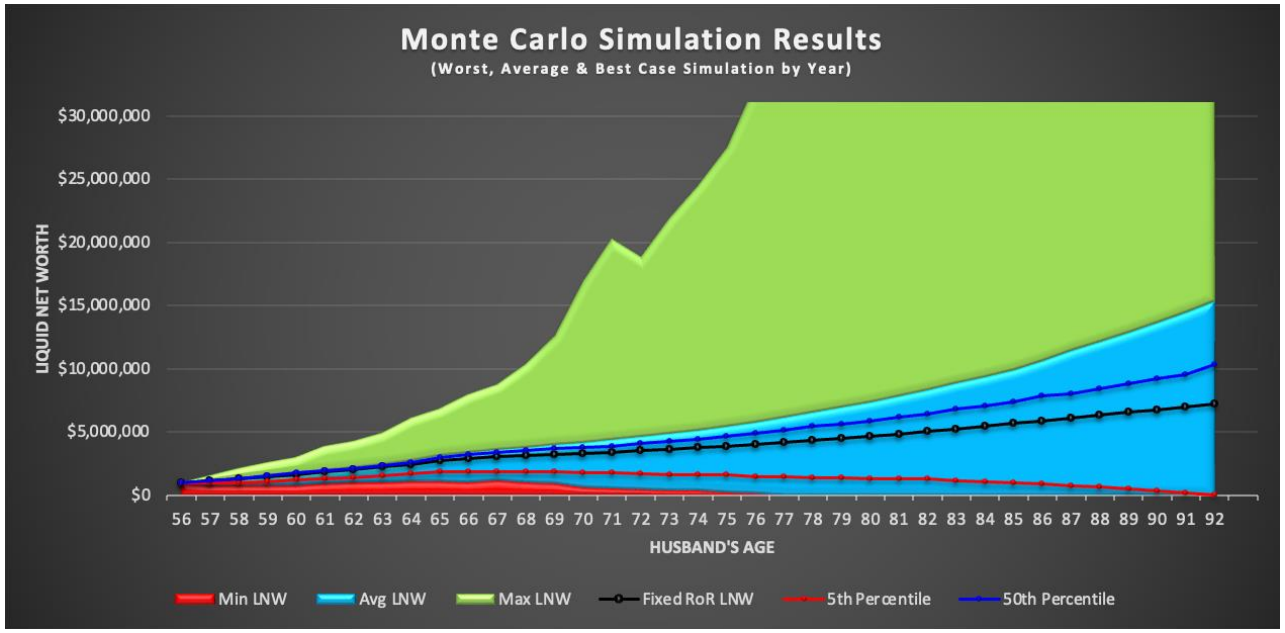
# Net Worth – *Monte Carlo Simulation Results*

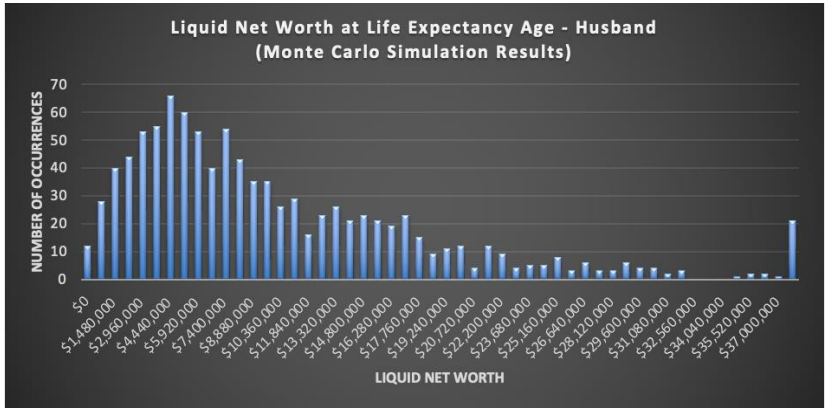
| RESULTS | Fixed Rate of Return Results | | Monte Carlo Results | |
|---|---|---|---|---|
| | Husband | Wife | Husband | Wife |
| Can you Retire at Desired Age? | YES | YES | YES | MAYBE |
| $$'s/Success % at Life Exp. Age | $5,694,603 | $7,291,259 | 99% | 95% |
| Net Worth ($+Equity) at Life Exp. Age | $6,147,444 | $7,811,431 | | |
| Estate Plan/Target & Success % | | $1,000,000 | MAYBE ---> | 90% |

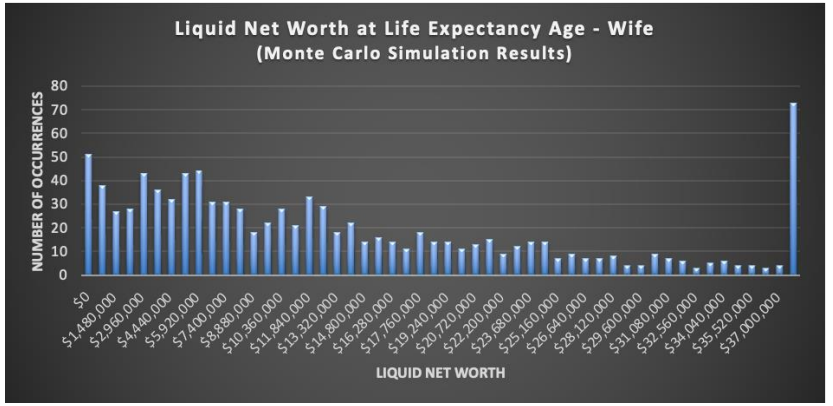
| Type of Simulation | Normal Distribution | |
|---|---|---|
| # of Simulations | 1,000 | |
| Stocks - Mean, Std Dev | 8% | 16% |
| Bonds - Mean, Std Dev | 4% | 4% |

**Probability of Success based on Monte Carlo Simulation**




- **Total Net Worth** – ***Monte Carlo Simulation*** results are from using a normal distribution, 1000 simulations using mean & std dev above
- The Likelihood of Success vs Life Expectancy plot estimates your success rate of not running out of money within +/- 5 years of the husband and wife's life expectancy.
- The Liquid Net Worth at Life Expectancy plots shows you the range of Net Worth that is calculated from the Monte Carlo simulations
- **A success rate > 95% is assumed to be acceptable**; **a success rate less than 75% is assumed to be unacceptable**.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# SENSITIVITY ANALYSIS

- **Sensitivity Analysis** calculates the impact of changing Inputs on your Net Worth
- Look at the **Sensitivity Plots** and identify the parameters that you can change to meet your financial goals.
- **Parameters with the greatest slope** are the most impactful

# Sensitivity Analysis – *Results Summary*

***Sensitivity Analysis*** is arguably one of the most useful features of this Report. It **answers the 2 important questions everyone has**: **When Can I Retire?** and **Will I Run Out of Money in Retirement?**. This analysis **calculates the impact of controllable parameters on your Net Worth**. "Controllable parameters" are those that you can control and act upon e.g. the age you retire, or how much you spend. By evaluating the relative importance of these parameters, you can **take specific actions** that will allow you to meet your retirement goals.

### "Controllable" Parameters

- ✓ Husband & Wife's Retirement Age
- ✓ Expenses - Before & During Retirement
- ✓ Asset Allocation & Annual Re-balancing

### "Non-Controllable" Parameters

- × Husband & Wife's Income
- × Husband & Wife's Life Expectancy
- × Savings (you control expenses, not savings)
- × Taxes
- × Stock Rate of Return & Volatility

### How the Tables Below Were Created:

- A single parameter value is changed (keeping all others constant) until it meets the requirement of not running out of money at the wife's life expectancy age
- This process is repeated for each parameter shown in the table.
- Calculations done using Fixed Rate of Return assumption & Monte Carlo Simulations

## Fixed Rate of Return Results

| | |
|---|---|
| Husband's Retirement Age | 59 |
| Wife's Retirement Age | 54 |
| Yearly Expense | $101,300 |
| Expense in Retirement | 156% |
| Stock Rate of Return | N/A |
| Pre-Retirement Stock Asset Allocation | 10% |
| *Retirement Stock AA (if not possible with pre-retirement AA) | 65% |

**This projection is likely not realistic** because market returns change significantly each year.

## Monte Carlo Analysis Results

| | |
|---|---|
| Husband's Retirement Age | 66 |
| Wife's Retirement Age | 66 |
| Yearly Expense | $73,500 |
| Expense in Retirement | 98% |
| Stock Rate of Return | N/A |
| Pre-Retirement Stock Asset Allocation | N/A |
| *Retirement Stock AA (if not possible with pre-retirement AA) | N/A |

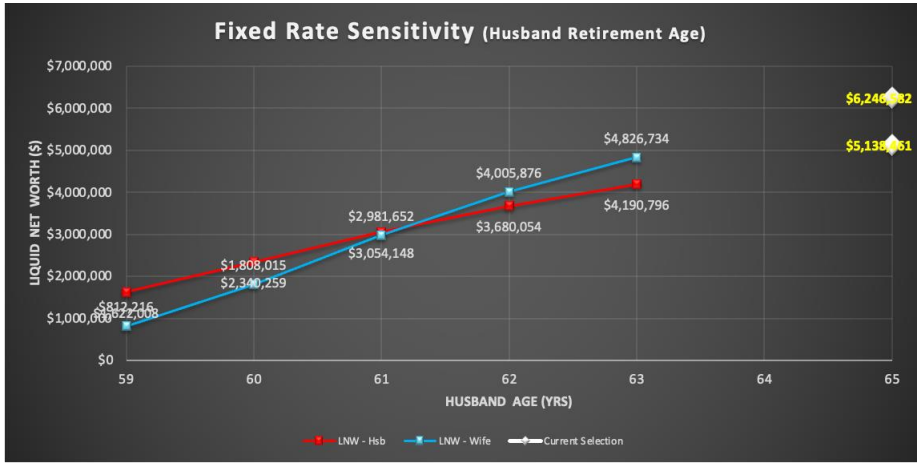
**95% Likelihood of Success** based on Monte Carlo simulation

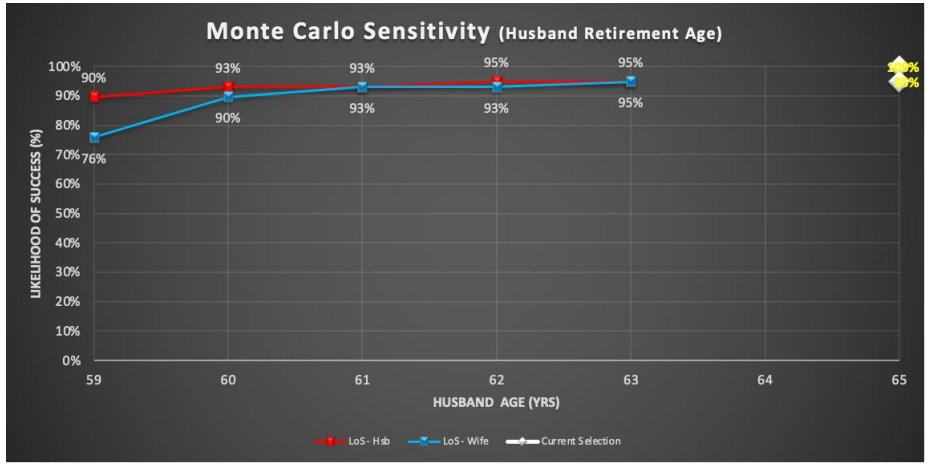
# Sensitivity Analysis – *Results: Retirement Age*

## Fixed Rate of Return Results

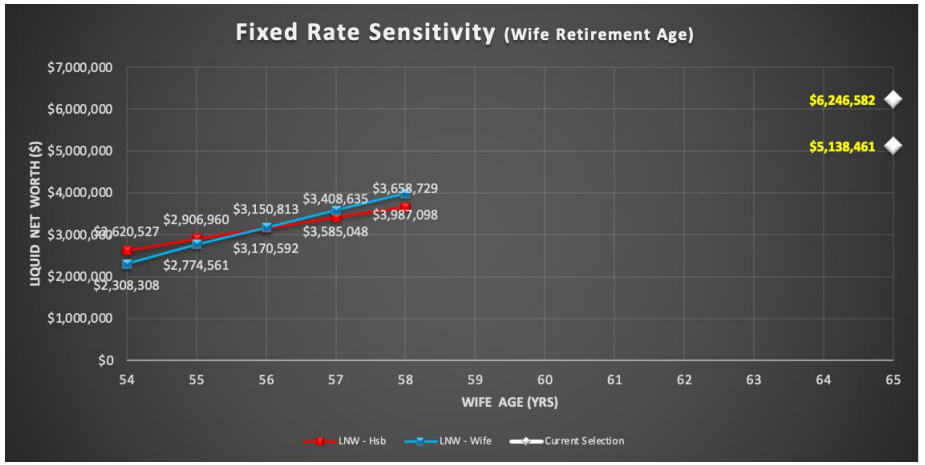
## Monte Carlo Simulation Results

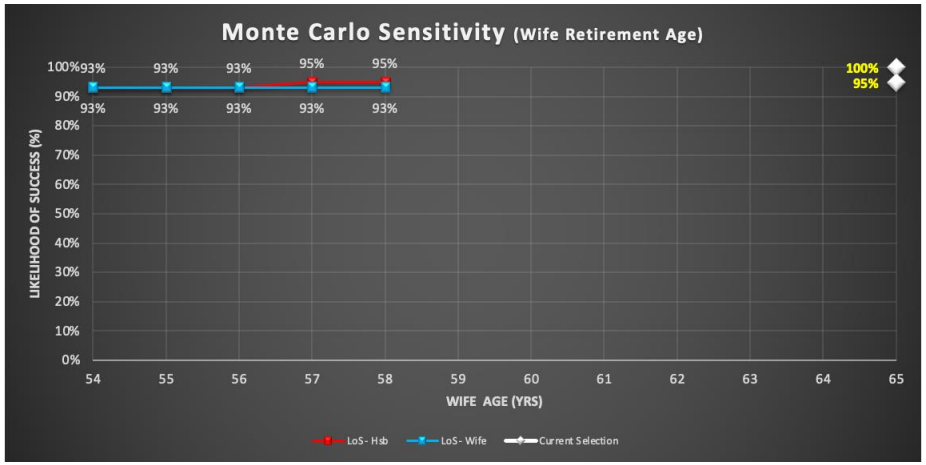
### Husband's Age Results




### Wife's Age Results




- Flat lines indicate low impact; lines with **high slope indicate significant impact of parameter**
- **Fixed Rate of Return Results:** liquid net worth at wife's life expectancy age
- **Monte Carlo Results:** likelihood of success (LoS) at wife's life expectancy age
- **Focus on the Monte Carlo graphs, not fixed rate of return graphs**, as they are more "realistic"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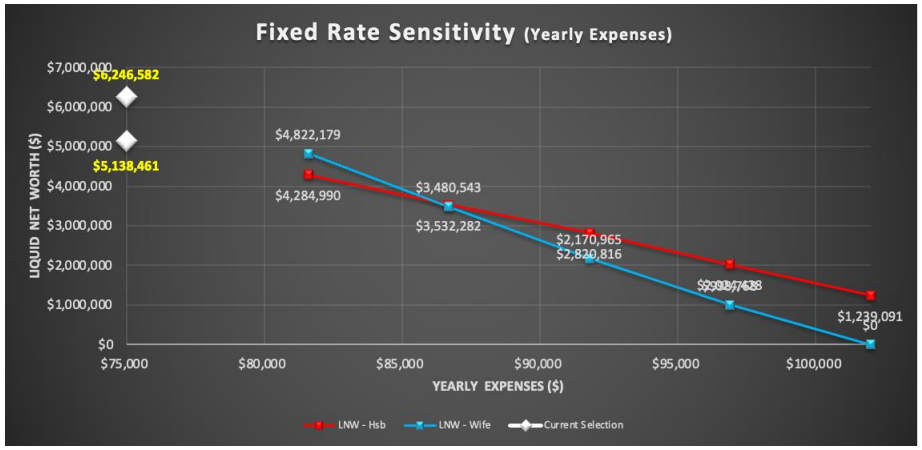
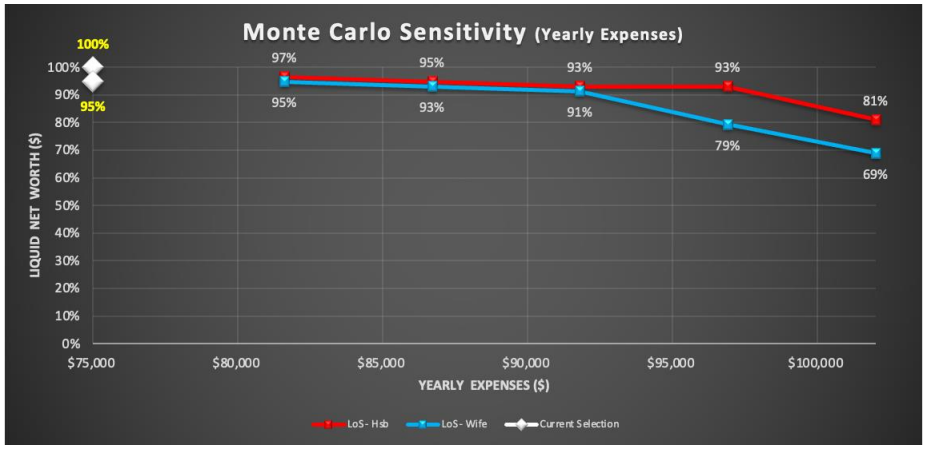
# Sensitivity Analysis – *Results: Expenses*

## Fixed Rate of Return Results

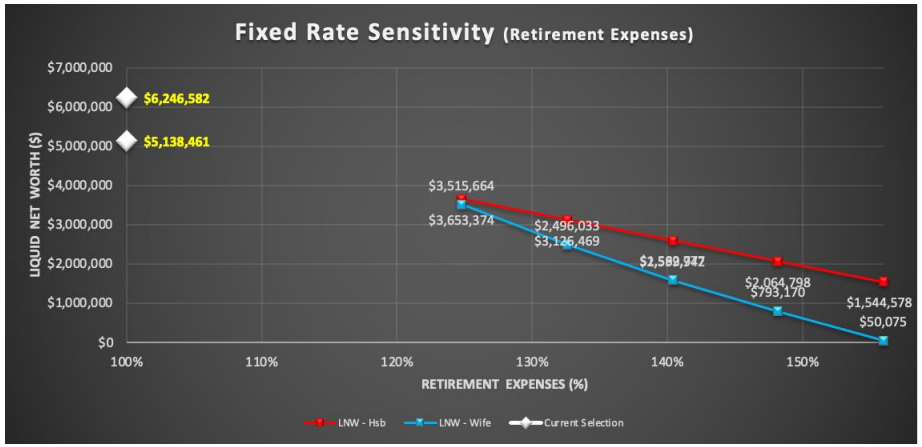
## Monte Carlo Simulation Results

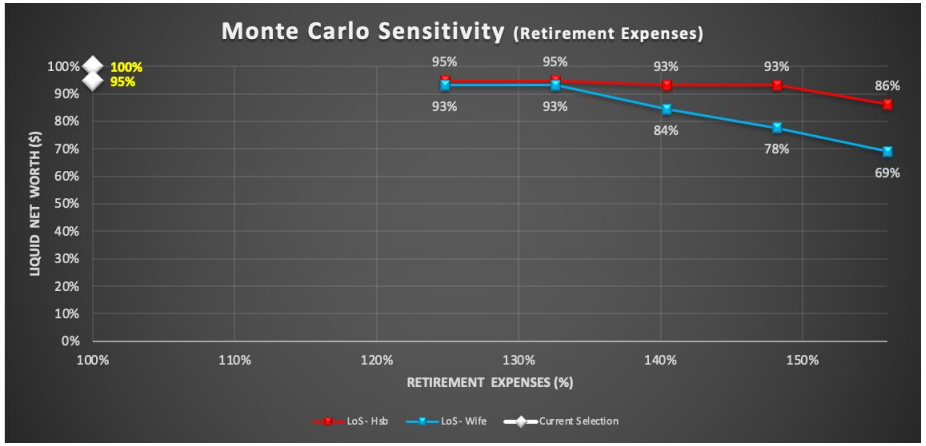
### Yearly Expenses




### Retirement Expense




- Flat lines indicate low impact; lines with **high slope indicate significant impact of parameter**
- **Fixed Rate of Return Results:** liquid net worth at wife's life expectancy age
- **Monte Carlo Results:** likelihood of success (LoS) at wife's life expectancy age
- **Focus on the Monte Carlo graphs, not fixed rate of return graphs**, as they are more "realistic"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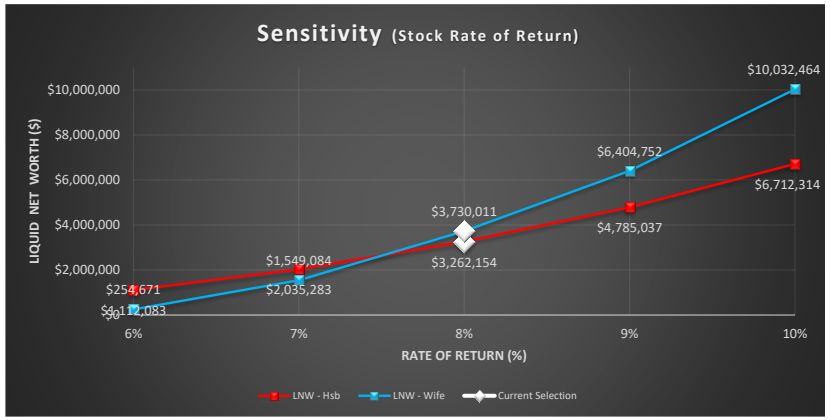
# Sensitivity Analysis – *Results: Rate of Return & Volatility*

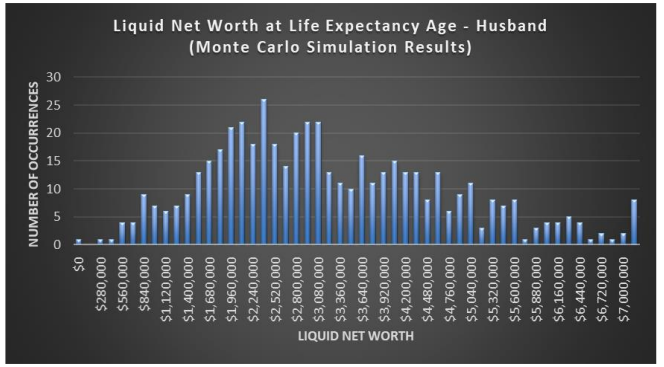



| Rate of Return | LNW - Hsb | LoS - Hsb | LNW - Wife | LoS - Wife | LoS - Estate Plan |
|---|---|---|---|---|---|
| 6% | $1,112,083 | | $254,671 | | |
| 7% | $2,035,283 | | $1,549,084 | | |
| 8% | $3,262,154 | | $3,730,011 | | |
| 9% | $4,785,037 | | $6,404,752 | | |
| 10% | $6,712,314 | | $10,032,464 | | |
| 8% | $3,262,154 | 91% | $3,730,011 | 65% | 64% |

- **Compare the 6% return vs 10% return plots** to understand the impact of Rate of Return and Yearly Compounding to your Net Worth
- **Compare 6% std dev vs 14% std dev plots** to understand the impact of Stock Rate of Return Volatility to your Net Worth and Success Rate

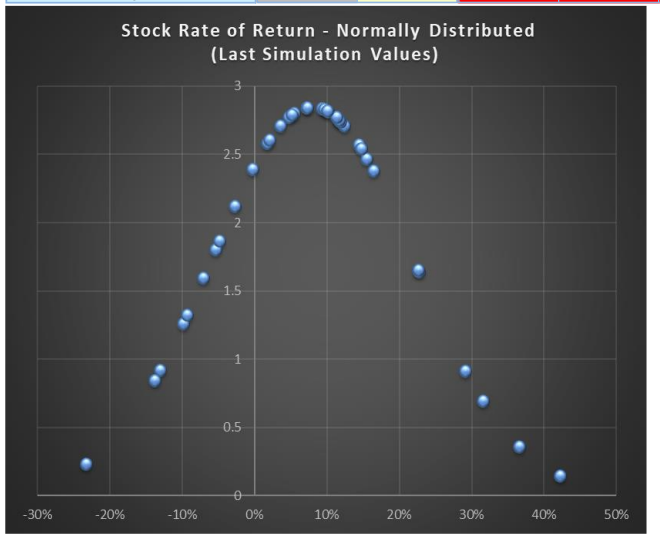
## Rate of return = 8%, Low Volatility (Std Dev) = 6%

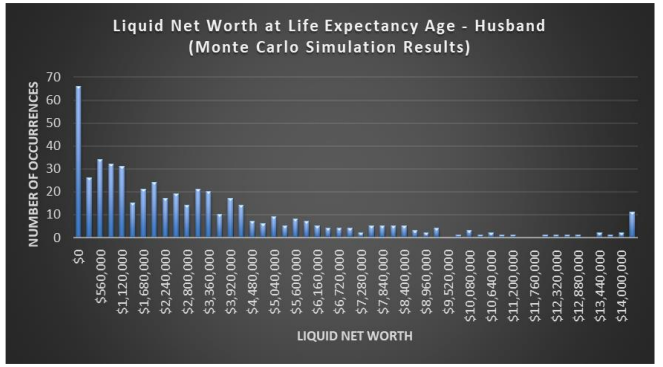
| RESULTS | Fixed Rate of Return Results | | Monte Carlo Results | |
|---|---|---|---|---|
| | Husband | Wife | Husband | Wife |
| Can you Retire at Desired Age? | YES | YES | YES | YES |
| $$'s/Success % at Life Exp. Age | $3,262,154 | $3,730,011 | 100% | 96% |
| Net Worth ($+Equity) at Life Exp. Age | $3,714,994 | $4,250,183 | | |
| Estate Plan/Target & Success % | | $1,000,000 | MAYBE ---> | 87% |




## Rate of return = 8%, High Volatility (Std Dev) = 14%

| RESULTS | Fixed Rate of Return Results | | Monte Carlo Results | |
|---|---|---|---|---|
| | Husband | Wife | Husband | Wife |
| Can you Retire at Desired Age? | YES | YES | MAYBE | NO |
| $$'s/Success % at Life Exp. Age | $3,262,154 | $3,730,011 | 87% | 68% |
| Net Worth ($+Equity) at Life Exp. Age | $3,714,994 | $4,250,183 | | |
| Estate Plan/Target & Success % | | $1,000,000 | NO ---> | 56% |

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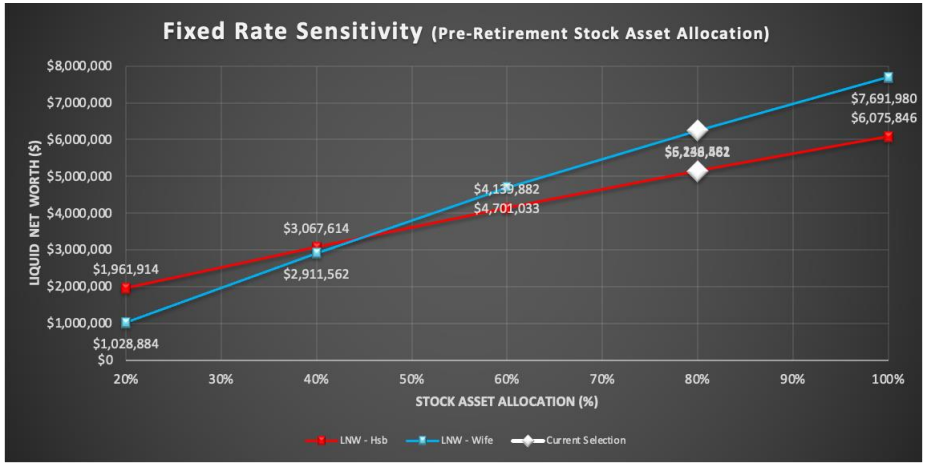
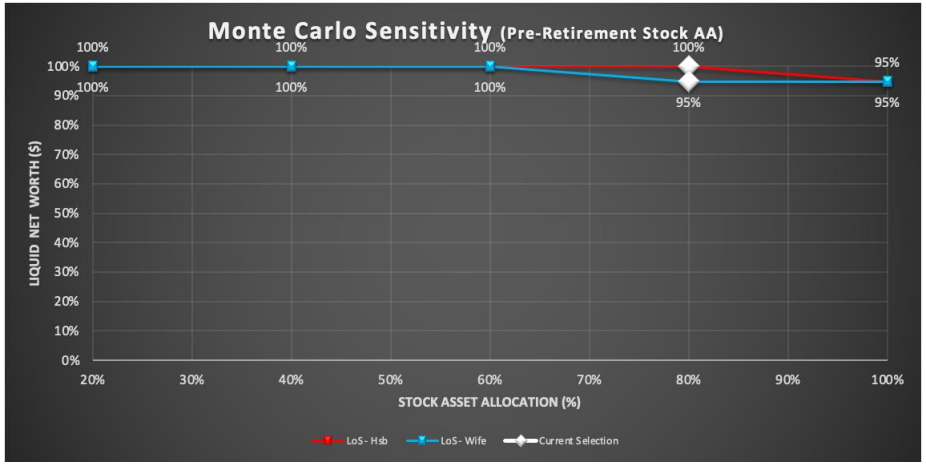
# Sensitivity Analysis – *Results: Asset Allocation & Re-balancing*

## Fixed Rate of Return Results

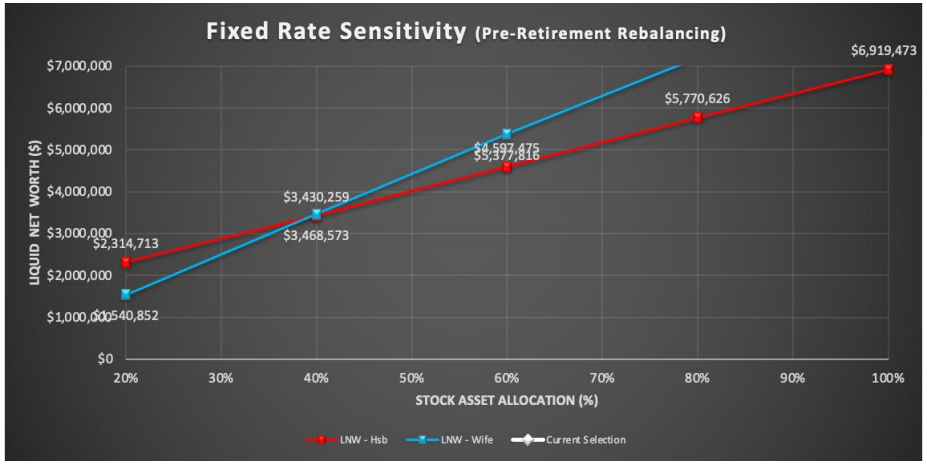
## Monte Carlo Simulation Results

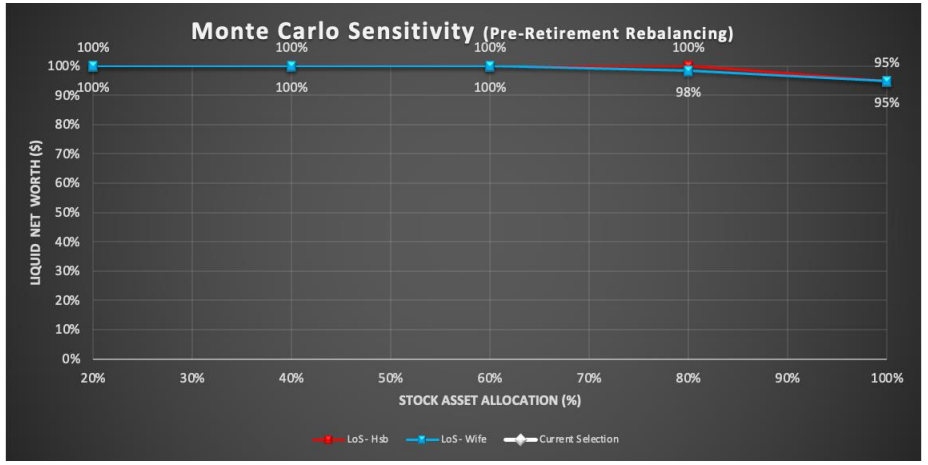
**Stock Allocation**




**With Annual Rebalancing**

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