

MayRetire.com Retirement Calculator - User Manual

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1. Introduction

Welcome to the MayRetire.com Retirement Calculator! This tool is designed to help Canadians project their retirement finances, understand potential outcomes under various market conditions, and explore different strategies for managing their retirement savings and income. It uses detailed inputs and offers both straightforward calculations and sophisticated Monte Carlo simulations to provide a comprehensive picture of your potential retirement journey.

This manual will guide you through the various input sections and explain how to interpret the results.

Note: Throughout the calculator, you will notice question mark icons [?] next to many input fields and options. Clicking on this icon will display helpful information, definitions, or explanations specific to that item. Don't hesitate to click these icons if you are unsure about what a particular field requires or how a setting works.



Spouse RRSP at start of retirement —

— \$235,000 +

2. Getting Started: Basic Setup

This section captures fundamental information about you and your retirement timeline.

- **Plan For:** Choose 'Single' or 'Couple'. Selecting 'Couple' enables specific features for planning together, such as CPP splitting and pension income sharing considerations for tax optimization.
- **Province:** Select your current province or territory of residence. This is crucial for applying the correct regional tax rates and credits to your projections.
- **Retirement Status:**
 - **Planning:** Select if you are still working and saving for retirement. Calculations focus on building and optimizing savings.
 - **Retired:** Select if you have already stopped working. Calculations focus on managing and distributing your existing retirement income.
- **Current Age(s) (Retired Status Only):** Enter your current age (and your spouse's age if planning as a couple).
- **Retirement Start Age(s) (Planning Status Only):** Enter the age(s) you (and your spouse) plan to stop working and begin drawing retirement income. This marks the beginning of the financial projections.
- **End Age:** Choose the age until which the retirement plan projections should extend (e.g., 90, 95). This defines the duration over which income sustainability is calculated.

- **Canada Pension Plan (CPP) Details:**
 - **Started CPP (Toggle - Retired Status Only):** Indicate if you (or your spouse) have already started receiving CPP benefits.
 - **Start CPP Age:** Select the age (60-70) you (and your spouse) plan to start receiving CPP. Delaying increases monthly benefits; starting early decreases them.
 - **CPP Amount:** Enter the *projected* monthly CPP benefit you (and your spouse) expect to receive *at age 65*. Obtain this estimate from Service Canada. The calculator adjusts this based on your chosen start age.
 - **CPP Current (Retired Status Only):** Enter the *current* monthly CPP amount you (and your spouse) are actually receiving.
- **Old Age Security (OAS) Details:**
 - **Started OAS (Toggle - Retired Status Only):** Indicate if you (or your spouse) are already receiving OAS payments.
 - **Start OAS Age:** Select the age (65-70) you (and your spouse) plan to start receiving OAS. Delaying increases monthly payments.
 - **OAS Amount:** Enter the *projected* monthly OAS benefit you (and your spouse) expect to receive *at age 65*. Estimate based on current rates and eligibility. The calculator adjusts based on your chosen start age.
 - **OAS Current (Retired Status Only):** Enter the *current* monthly OAS amount you (and your spouse) are actually receiving.
- **Split CPP (Toggle):** If enabled (for couples), aims to equalize the *taxable* CPP income between both spouses after retirement begins, regardless of individual contribution history. This doesn't change the total CPP received but can optimize the couple's overall tax situation.
























Planning for single:

Province or territory — ? Ontario ▼	Your retirement status ? Planning ▼
Start retirement age — ? — 65 +	End planning age — ? — 90 +
Planning For — ? Single ▼	
CPP start age — ? — 68 +	OAS start age — ? — 65 +
CPP at age 65 — ? — \$1,200 +	OAS at age 65 — ? — \$727 +

Planning for couple:

Province or territory — ? Ontario ▼	Your retirement status ? Planning ▼
Start retirement age — ? — 60 +	End planning age — ? — 90 +
Planning For — ? Couple ▼	Split CPP — ? <input checked="" type="checkbox"/>
Spouse age at start of your retirement — ? — 59 +	
CPP start age — ? — 70 +	OAS start age — ? — 65 +
CPP at age 65 — ? — \$1,200 +	OAS at age 65 — ? — \$727 +
Spouse CPP start age ? — 70 +	Spouse OAS start age ? — 65 +
Spouse CPP at age 65 ? — \$800 +	Spouse OAS at age 65 ? — \$727 +

Retired couple:

Province or territory —  Ontario	Your retirement status  Retired
Your current age —  — 65 +	End planning age —  — 90 +
Planning For —  Couple	Split CPP  
Your spouse current age —  — 67 +	
Started receiving CPP  	Started receiving OAS  
CPP start age —  — 68 +	
CPP at age 65 —  — \$1,200 +	Your current OAS —  — \$727 +
Spouse CPP started —  	Started receiving OAS  
Spouse CPP start age  — 67 +	Spouse OAS start age  — 66 +
Spouse current CPP —  — \$800 +	Spouse current OAS —  — \$727 +

3. Inputting Your Assets

This section details the financial resources you have or expect to have for retirement. You will enter a single balance figure for each account type. The meaning of this figure depends on your selected 'Retirement Status':

- **If 'Planning':** Enter the *projected total balance* you expect to have in the account *at the start* of your retirement. This value is used to calculate how the account contributes to your overall retirement income and how long the funds may last.
- **If 'Retired':** Enter the *current balance* of the account. This figure is used to assess your available funds and calculate how these assets can support your ongoing retirement income needs.
- **Tax-Free Savings Account (TFSA):** Enter the balance (current or projected at retirement start) for your TFSA(s).
- **Registered Retirement Savings Plan (RRSP):** Enter the balance (current or projected at retirement start) for your RRSP(s)/RRIF(s).
- **Unregistered Investments:** (Assets outside TFSA/RRSP) Enter the balance (current or projected at retirement start) for your non-registered investment account(s).
- **Initial Capital Gain (%):** Enter the current *unrealized* capital gain (or loss) as a percentage of the total *unregistered* account value. Example: \$250k account value with \$50k gain (cost base \$200k) = enter 25%. \$90k account value with \$10k loss (cost base \$100k) = enter -10%. This is used for tax calculations on withdrawals or deemed disposition from this account.

Inputting your assets:

Current TFSA balance				?
—	\$150,000		+	

Current RRSP balance				?
—	\$700,000		+	

Spouse Current TFSA balance				?
—	\$150,000		+	

Spouse Current RRSP balance				?
—	\$300,000		+	

Current Unreg Investment balance				?
—	\$200,000		+	

Initial Capital Gain/Loss for Unreg Account (%)				?
—	Loss	10.00	Gain	+

4. Defining Income Needs & Strategy

Specify your income goals and how you generally plan to withdraw funds.

- **Required Annual Income:** Enter the total *after-tax* annual income you need during retirement, expressed in *today's dollars*. This is your target lifestyle funding.
- **Minimum Annual Income:** Enter the *lowest* acceptable annual after-tax income (in today's dollars). This can be used in flexible strategies or to assess plan resilience.
- **Income Withdrawal Strategy:**
 - **Constant Dollar:** Withdraw the same inflation-adjusted amount each year (predictable but less adaptable).
 - **Flexible:** Allows annual withdrawal amounts to adjust based on market performance (potentially enhances sustainability).

Target annual income (after tax)

—

\$85,000

+

Income Withdrawal Strategy:

Flexible

▼

Minimal annual income (after tax)

—

\$80,000

+

5. Setting Investment Assumptions

Define your expectations for how your investments might perform. These are averages used in the projections.

- **Price Appreciation Rate (%):** Enter the expected average *annual rate of return from price growth*, already adjusted for inflation (a "real" return). Excludes dividends. A 0% rate means investments are expected only to keep pace with inflation.
- **Dividend Yield (%):** Enter the expected average *annual dividend yield* as a percentage of your investment value. This represents the income component of returns.
- **Dividend Change Sensitivity (%):** Models how much dividend amounts might change in response to stock price changes (0-100%). 50% means a 10% stock price change causes a 5% dividend change. 100% means the dividend yield percentage stays constant.

Investment Price Appreciation % (inflation adjusted) ?			
—	Less risk	1.80	More risk +
Initial Dividend Yield — ?			
—		1.50	+
Dividend Change Sensitivity — ?			
—		50	+

6. Configuring Withdrawal Strategies

This section allows for fine-tuning how funds are withdrawn from different account types.

6.1 General Withdrawal Settings

- **TFSA Withdrawal Rate (%):** Specifies the percentage of any *remaining* income shortfall (after CPP, OAS, and RRSP withdrawals) covered by TFSA withdrawals.
- **Fund TFSA (Toggle):** If enabled, allows RRSP/Unregistered withdrawals to *exceed* spending needs specifically to make TFSA contributions (if room exists). Also prioritizes RRSP/Unregistered funds, using TFSA as a last resort.

Fund TFSA with RRSP/Unreg Withdrawals ?

Enable TFSA Funding: ☐

TFSA withdrawal rate (0-100) ?

— Slower 0 Faster +

- **RRIF Minimum Withdrawal - Use Younger Spouse's Age (Toggle):** If you have already selected to use your younger spouse's age for RRIF minimum withdrawals, turn this option on. If you haven't made the selection yet, use this setting based on what you plan to choose when opening your RRIF. Using a younger spouse's age can lower your minimum required withdrawals, helping defer taxes and preserve savings longer.

RRIF Minimum Withdrawal ?

Use Younger Spouse's Age: ☐

- **Unregistered Account Dividends:** Choose how dividends from unregistered accounts are used:
 - **Withdraw dividends first:** Prioritizes using dividend income before other unregistered funds.
 - **As part of unregistered withdrawal:** Treats dividends like any other part of the unregistered account withdrawal.

The image shows a screenshot of a web form. At the top, there is a label 'Unregistered Account Dividends Withdrawal:' followed by a dropdown menu. The dropdown menu is currently open, showing two options: 'Withdraw dividends first' and 'As part of unregistered withdrawal'. A pink question mark icon is visible next to the label. The dropdown menu has a light purple background and a dark border.

Unregistered Account Dividends Withdrawal: ?

Withdraw dividends first

As part of unregistered withdrawal

- **RRSP Withdrawal strategy** : Choose from one of the predefined RRSP withdrawal strategies or create a custom strategy tailored to your specific needs (see the following section for details on customization).

The predefined strategies reflect different levels of aggressiveness in drawing down your RRSP/RRIF balances:

- **Conservative RRSP Drawdown**: Prioritizes minimal withdrawals, often relying more on other income sources and preserving RRSP/RRIF balances longer into retirement.
- **Moderate RRSP Drawdown**: A balanced approach that draws a reasonable amount from RRSP/RRIF accounts while considering tax efficiency.
- **Progressive RRSP Drawdown**: Increases RRSP withdrawals gradually, typically aligning with rising income needs or shifting tax circumstances.
- **Accelerated RRSP Drawdown**: A more aggressive strategy that prioritizes early RRSP withdrawals, useful for aggressive RRSP meltdown planning or reducing long-term tax liability.

RRSP Withdrawal Strategy: ?

Moderate RRSP Drawdown ▼

[Customize Strategy](#)

Conservative RRSP Drawdown

Moderate RRSP Drawdown

Progressive RRSP Drawdown

Accelerated RRSP Drawdown

Custom strategy


6.2 Detailed RRSP Withdrawal Strategies

You can select pre-configured strategies or customize your own approach using the options below.


- **RRSP Meltdown (Toggle):** If enabled, allows RRSP withdrawals to *exceed* the required income for the year (subject to limits below), aiming to shift funds to TFSA or unregistered accounts, potentially in lower-tax years.
- **RRSP Withdrawal Rate (%):** (*If RRSP Meltdown is disabled*) Sets the proportion of any income shortfall (after CPP/OAS) covered by RRSP withdrawals. If insufficient, the calculator may override this to meet the required income.
- **Bridging (Toggle):** Enables additional RRSP withdrawals to supplement income *before* CPP and OAS benefits begin. Amount/tax limits still apply.
- **OAS Clawback Management (Toggle):** Attempts to adjust RRSP withdrawals *downward* to avoid or minimize OAS clawback, provided other funds (TFSA/Unregistered) are available to meet income needs. Will not go below RRIF minimums or any set minimum withdrawal amount.
- **Withdrawal Amount Limits:** Control the annual RRSP withdrawal amount: (Relevant help text:
 - *No Limit:* Withdrawals based solely on other parameters.
 - *Fixed Amount:* Withdraw a specific amount each year (overrides other limits; adjusts if balance is insufficient).
 - *Min Amount Only:* Sets a minimum withdrawal target (actual may be lower if balance is low).
 - *Max Amount Only:* Sets a maximum withdrawal target (may be exceeded by RRIF minimums later in retirement). Sets both floor and ceiling.
- **Tax Rate Targets:** Control withdrawals based on tax impact:
 - *No Tax Limit:* Tax rates do not restrict withdrawals.
 - *Marginal Tax Rate Only:* Limits withdrawals based on reaching a target marginal tax rate (tax on the next dollar).
 - *Effective Tax Rate Only:* Limits withdrawals based on reaching a target effective (average) tax rate.
 - *Marginal and Effective Tax:* Limits withdrawals based on whichever target (marginal or effective) is reached first.
- **Target Marginal/Effective Tax Rate (%):** Enter the specific percentage for the chosen tax rate target(s). Withdrawals are adjusted on a best-effort basis to meet these targets within other constraints.


Custom RRSP Withdrawal strategy:


RRSP Withdrawal Strategy

RRSP withdrawal limit 


Range (min and max) ▼


Minimum RRSP withdrawal  — \$2,000 +


Maximum RRSP withdrawal  — \$80,000 +


Tax rate target 


Marginal and effective tax ▼


Effective tax rate target  — 12.0 +

Marginal tax rate target  — 40.0 +

RRSP meltdown within limits 

Enable RRSP meltdown 

RRSP adjustment to avoid OAS clawback 

Use RRSP withdrawal adjustment 

Cancel Save

7. Adding Optional Details: Additional Withdrawals & Incomes

For a more personalized plan, you can factor in specific, non-regular cash flows.

7.1 Additional Withdrawals

Factor in unique or recurring expenses beyond your regular required income (e.g., travel, car purchase, gifts).

- **Withdrawal Name:** A descriptive label (e.g., "Annual Trip", "Car Replacement").
- **Annual Withdrawal Amount:** The yearly amount for this expense (in today's dollars).
- **Withdrawal Strategy:**
 - **Constant Dollars:** Fixed inflation-adjusted amount each year.
 - **Flexible:** Amount can vary based on available funds (requires setting a minimum).
- **Minimal Withdrawal:** *(If Flexible strategy selected)* The minimum required after-tax amount for this expense.
- **Withdrawal Starts (Year):** How many years into retirement this withdrawal begins (1 = first year).
- **Withdrawal Repeats:**
 - **Once:** One-time expense.
 - **Indefinitely:** Occurs every year for the rest of the plan.
 - **Fixed Term:** Occurs for a specific number of years.
- **Withdrawal For Years:** *(If Fixed Term selected)* The number of years the withdrawal occurs.

Setting Additional Withdrawal:

Extra Withdrawal

Withdrawal name (Go-go phase, Travel, Present, Car purchase...) ?

GoGo Phase

Annual Withdrawal Amount ?

— \$12,000 +

Additional Withdrawal Strategy: ?

Flexible ▼

Minimal annual income (after tax) ?

— \$8,000 +

Starts from (years into retirement) ?

— 1 +

Withdrawal repeats ?

Once Indefinitely ☒ Fixed Term

Withdrawal is made for (years) ?

— 8 +

Cancel Save

7.2 Additional Incomes

Include other expected income sources (e.g., pensions, rental income, annuities, corporate dividends).

- **Income Name:** A descriptive label (e.g., "Work Pension", "Rental Property").
- **Annual Income Amount:** The starting yearly amount (in today's dollars).
- **Income Change (%):** Adjusts how the income grows relative to inflation.
 - **0:** Income grows exactly with inflation (constant purchasing power).
 - **Negative % (e.g., -2%):** Income is fixed nominally and loses purchasing power if inflation is positive (enter the negative of expected inflation).
 - **Positive %:** Income grows faster than inflation by this percentage.
- **Taxation Category:** How the income is taxed:
 - **Tax Free:** No tax.
 - **Regular Income:** Taxed at marginal rates.
 - **Eligible Dividends:** Taxed at preferential rates (Canadian corporations).
 - **Non-Eligible Dividends:** Taxed higher than eligible dividends.
 - **Capital Gains:** Taxed at 50% of the rate of regular income.
- **Income Attributed To:** (*Couple plans only*) Select who reports this income for tax: 'You', 'Spouse', or 'You & Your Spouse' (50/50 split).
- **Income Starts (Year):** How many years into retirement this income begins (1 = first year).
- **Income Repeats:** 'Once', 'Indefinitely', or 'Fixed Term'.
- **Income For Years:** (*If Fixed Term selected*) The number of years the income is received.

Setting Additional Income:

Extra Income

Income name (pension, annuity, corp dividends,...) ?
Rental Income

Annual Income Amount ?
— \$15,000 +

Inflation Adjusted Annual Income Change ?
— 1.00 +

Income Taxation Category ?
Regular Income ▼

Income attribution: ?
You & Your Spouse (Joined) ▼

Starts from (years into retirement) ?
— 1 +

Income repeats ?

Once Indefinitely ☒ Fixed Term

Income is made for (years) ?
— 12 +

Cancel

Save

8. Running the Calculation/Simulation

Once your inputs are complete, choose how to generate the projection:

- **Calculate:** Use this for a *quick, deterministic estimate* of your retirement finances.
 - **Method:** It assumes a *constant rate of return* each year based on your average Investment Assumptions (Price Appreciation + Dividend Yield).
 - **Output:** It generates a *single projection* showing the year-by-year breakdown of income, withdrawals, account balances, and taxes under these fixed return conditions. It provides a straightforward view but *does not* account for market variability, sequence of return risk, or provide confidence levels. The results will be displayed in the detailed annual charts (similar to the "Per Confidence Level" charts in a simulation, but representing only this single scenario) and the 'Table Projections' (see Section 9.7). You can then use the 'Withdrawal Strategies Evaluation' (see Section 9.5) to compare different strategies against this specific outcome.
- **Simulate:** Use this to run a *Monte Carlo simulation* (typically 500 scenarios) incorporating market variability based on your average return assumptions.
 - **Method:** Models the unpredictability of investment returns over time.
 - **Output:** Provides a *probabilistic range of outcomes*, including confidence levels, percentile graphs (Portfolio Projections, Success Rate), and allows viewing detailed breakdowns for specific simulation outcomes (e.g., median, conservative, optimistic) using the Confidence Level slider. You can then use the 'Withdrawal Strategies Evaluation' (see Section 9.5) to compare different strategies against the specific simulation outcome currently being viewed. This offers a more nuanced and realistic picture. **This is generally recommended for robust planning.**

Calculate

[Learn more](#)

Simulate

[Learn more](#)

9. Understanding Your Results

9.1 Introduction

This section explains the various charts, summaries, and tables generated by the MayRetire calculator after you run a projection. Understanding these outputs is key to assessing your retirement plan's potential viability and exploring different strategies.

There are two main ways to generate results:

1. Calculate: Provides a single, deterministic projection based on fixed average rates of return. It shows one possible outcome if your assumptions hold true every year without variation.
2. Simulate: Runs a Monte Carlo simulation (e.g., 500 scenarios) incorporating market variability based on your average return assumptions. This provides a range of potential outcomes and associated probabilities (confidence levels).

Important Note: Many detailed charts and summary statistics shown after running 'Calculate' are *identical in format* to those shown when viewing a *specific percentile outcome* (e.g., the 50th percentile, or one selected via the slider) after running 'Simulate'. The descriptions below will clarify which results apply to which context.

9.2 Confidence Level Gauge (Simulate Only)

- Context: Appears only after running 'Simulate'.
- Description: This gauge displays the overall success probability of your plan across all simulated scenarios. It shows the percentage (%) of the 1,000 simulations where your funds lasted until your specified 'End Age' without running out. Higher percentages (often categorized as 'Good', 'Average', 'Poor') indicate a greater likelihood that your plan can withstand market volatility and meet your income needs throughout retirement.

Your retirement income is secure with a confidence level of 75%

[Learn more](#)

Average



9.3 Simulation Highlights

- **Context:** This section appears only after running a 'Simulate' operation.
- **Purpose:** The Highlights section provides a quick, at-a-glance overview of the frequency of specific, potentially noteworthy outcomes that occurred across *all* the simulated scenarios (e.g., across all 500 or 1000 simulations run). It helps identify common patterns, potential risks, or significant trends in the overall results without needing to examine each individual scenario.
- **Format:** It typically displays a grid of boxes, each dedicated to a specific highlight metric.
- **Content of Each Highlight Box:**
 - **Title:** Describes the specific outcome being highlighted.
 - **Information Icon (i / ?):** You can usually click this icon next to the title to get more details or a definition of how that specific highlight metric is calculated or defined within the tool.
 - **Percentage:** Shows the percentage of simulations where this specific outcome occurred (e.g., 71%, 63%, 0%).
 - **Description:** Provides context for the percentage, often explaining the criteria for the highlight and the number of simulations (e.g., "X out of Y simulations had...") that met this criteria.
- **How to Use:** Review these highlights to quickly gauge potential issues or strengths in your plan across the range of simulated possibilities. Generally, the higher the percentage for a specific highlight, the more common that outcome was across the simulations, suggesting it may warrant more attention in your planning (whether the outcome is desirable or undesirable depends on the specific metric). These highlights can guide further investigation using the detailed charts and tables for specific simulation percentiles.

Large End RRSP balance



71%

355 out of 500 retirement simulations had significant funds left in RRSPs, potentially leading to higher future taxes

Large Post-85 RRIF Balance



47%

235 out of 500 retirement simulations had significant funds left in funds at age 85 or later, potentially leading to higher future taxes

Large End Portfolio Value



9.6%

48 out of 500 retirement simulations had an end portfolio value that was at least 100% more than the initial portfolio value

Small End Portfolio Value



5.6%

28 out of 500 retirement simulations had a nonzero end portfolio value that was less than 25% of the initial portfolio value

Substantial OAS Clawback



63%

315 out of 500 retirement simulations had an OAS clawback exceeding \$1000 for 5 or more years

Total OAS Clawback



0.8%

4 out of 500 retirement simulations had the entire OAS benefit offset by the OAS clawback for 3 or more years

High Estate Tax



0%

0 out of 500 retirement simulations have estate tax greater than 12% at the end of the retirement period

TFSA Depleted Early



0%

0 out of 500 retirement simulations The entire TFSA balance was depleted 10+ years before the end of the planning period.

RRIF Dominant End Portfolio



4.8%

24 out of 500 retirement simulations had half or more of your assets at the end of the retirement planning period are held in your RRIF

Significant Tax Increase Periods

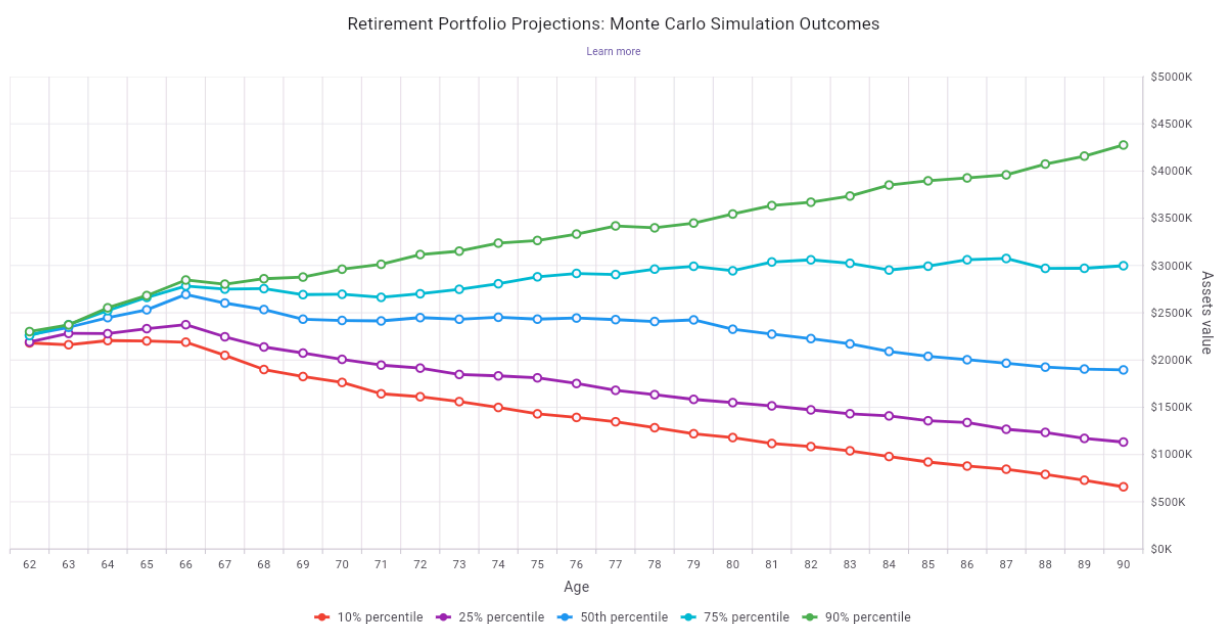


0%

0 out of 500 retirement simulations had tax payments exceed the retirement period's average tax by 100% or more

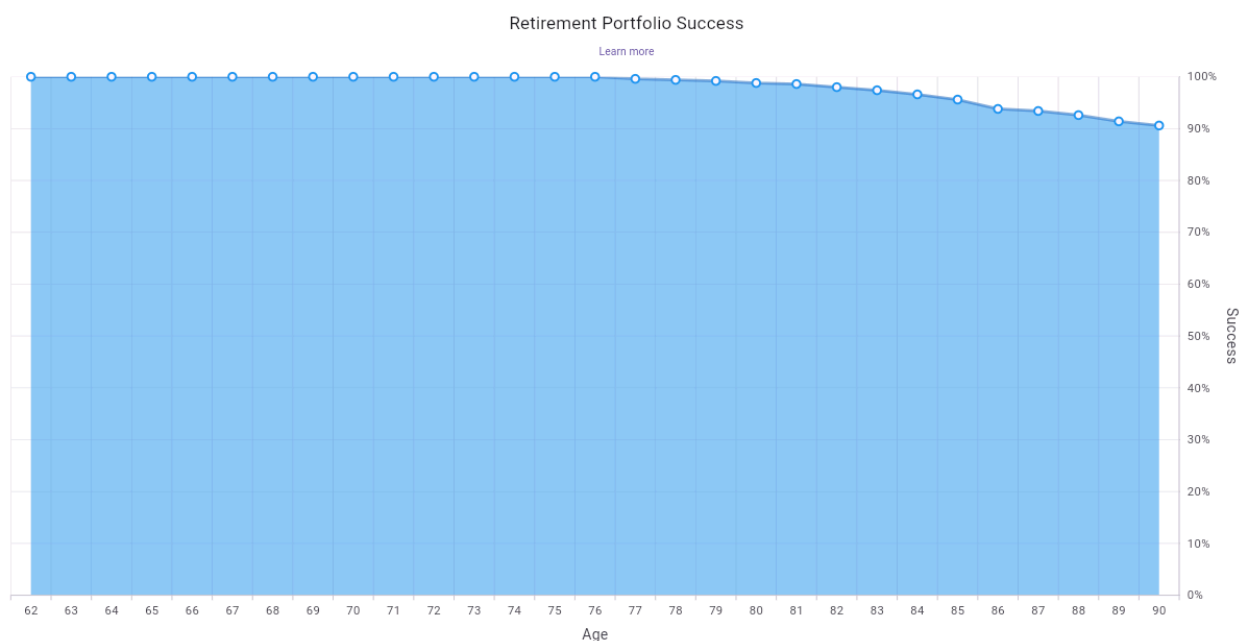
9.4 Portfolio Projections (Simulate Only)

- Context: Appears only after running 'Simulate'.
- Description: This line graph illustrates the range of potential total asset values (TFSA + RRSP/RRIF + Unregistered) over your retirement years across the different simulation outcomes. It typically shows lines representing various percentiles (e.g., 10th, 25th, 50th/Median, 75th, 90th). The 50th percentile represents the median outcome; lower percentiles (10th, 25th) represent less favorable market scenarios, while higher percentiles (75th, 90th) represent more favorable ones. Ideally, even the lower percentile lines should remain above zero throughout the planned retirement period, indicating portfolio resilience.



9.5 Portfolio Success Rate (Simulate Only)

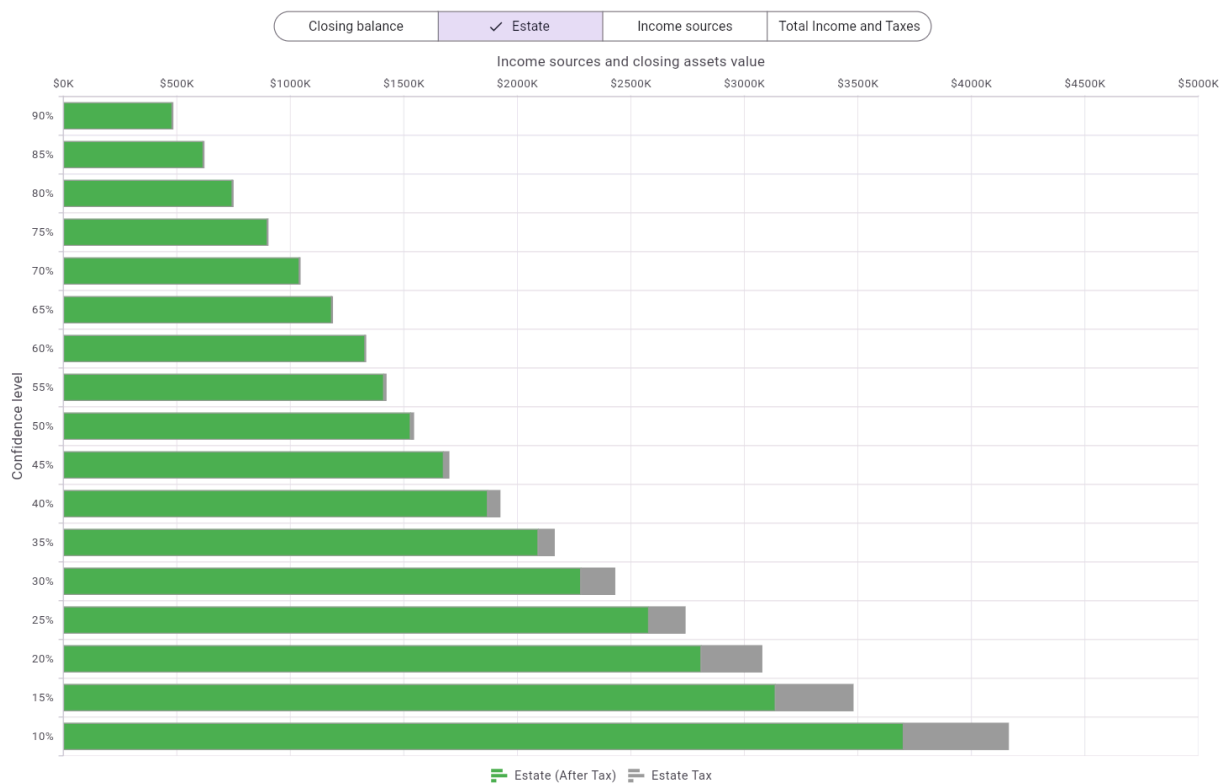
- Context: Appears only after running 'Simulate'.
- Description: This line graph tracks the probability of your plan still being successful (i.e., funds not depleted) at each age throughout your retirement, based on the percentage of simulations that succeeded up to that point. You typically want this line to remain as high as possible for as long as possible. A declining line indicates the increasing impact of potential market volatility and withdrawals over time.



9.6 Retirement Income and Asset Projections by Confidence Level:

- *Context:* This chart appears only after running 'Simulate'.
- *Purpose:* To provide a summary view of key final or average outcomes across various confidence levels (percentiles) generated by the simulation. This allows for easy comparison of results at different probability levels.
- *Format:* A horizontal bar chart where each bar corresponds to a specific confidence level (e.g., 10% to 90%). Includes filter buttons at the top (e.g., "Closing balance", "Estate", "Income sources", "Total Income and Taxes") that change the data displayed in the bars.
- *Components:* The Y-axis represents the Confidence Level (percentile), and the X-axis represents dollar values. The meaning of the bars and their segments depends on the selected filter button:
 - **Estate View:** When "Estate" is selected, the bars typically show the projected final estate value segmented into Estate (After Tax) (the net value transferable) and Estate Tax (the estimated tax liability).
 - **Closing Balance View:** When "Closing balance" is selected, the bars show the total end-of-plan closing balance (total remaining assets), segmented by account type, such as RRSP Balance, RRSP Balance (Spouse), TFSA Balance, and Unreg Balance.
 - **Income Sources View:** When "Income sources" is selected, the bars show the *total* annual income received across the plan duration for that percentile, segmented by source (CPP, OAS, RRSP, etc.).
 - **Total Income and Taxes View:** When "Total Income and Taxes" is selected, the bars show the gross income/withdrawals needed for that percentile, segmented into components like net income (spending), taxes, and clawback.
- *Usefulness:* This chart allows for a quick comparison of how key final or average outcomes (like estate value, remaining assets by type, average income sources, or average taxes) vary across the spectrum of simulation outcomes, from less favorable (lower percentiles) to more favorable (higher percentiles). It helps in assessing the range and probability of potential end results based on the simulation.

Retirement Income and Asset Projections by Confidence Level

[Learn more](#)

9.7 Scenario Summary

- Context: Appears after 'Calculate' OR when viewing a specific percentile outcome after 'Simulate'. These statistics summarize the cumulative or final results over the *entire duration* of the single scenario being viewed.
- Description: This section provides key totals and final values for the specific scenario projection, including metrics such as:
 - Max annual after-tax income: The highest single-year income received.
 - Min annual after-tax income: The lowest single-year income received.
 - Average annual after-tax income: The average yearly income across the entire plan duration.
 - Combined remaining TFSA amount: Total value left in TFSA(s) at the plan's end age.
 - Remained joined unregistered amount: Total value left in unregistered account(s) at the plan's end age.
 - Unreg capital gain (unrealized): (If applicable) The unrealized capital gain within the remaining unregistered amount at the end age.
 - Combined Dividends collected: Total dividends received (e.g., from unregistered) over the plan duration.
 - Remained RRSP/RRIF amount (you / spouse): Value left in each spouse's RRSP/RRIF at the plan's end age (can be \$0 if depleted).
 - Total CPP collected (you / spouse): The cumulative lifetime amount received from CPP for each spouse.
 - Total OAS collected (you / spouse): The cumulative lifetime amount received from OAS for each spouse.
 - Total Additional Income collected (you / spouse): The cumulative lifetime amount received from any added 'Additional Income' sources for each spouse.
 - Total Tax paid (you / spouse): The cumulative lifetime income tax paid by each spouse.
 - Max combined effective tax rate: The highest average tax rate experienced in any single year.
 - Max combined marginal tax rate: The highest marginal tax rate reached in any single year.
 - Total OAS clawback (you / spouse): The cumulative lifetime OAS clawback amount for each spouse.
 - Capital Loss Carryover: Any remaining capital losses available to carry forward at the plan's end age.
 - Compound price return (adjusted to inflation, fixed/simulation): The overall compound growth rate from price appreciation over the plan duration (label may indicate if based on fixed assumption or simulation average).
 - Compound total return (adjusted to inflation, fixed/simulation): The overall compound growth rate including both price appreciation and dividends over the plan duration (label may indicate source).

- Total Estate amount: The total value of all remaining assets *before* any potential estate taxes.
- After Tax Estate amount: The final estimated value of the estate *after* accounting for estimated estate taxes.
- Estate Tax: The calculated estate tax amount.
- Estate tax rate: The resulting effective tax rate on the estate for this scenario.
- Estate tax rate: The resulting effective tax rate on the estate for this scenario.

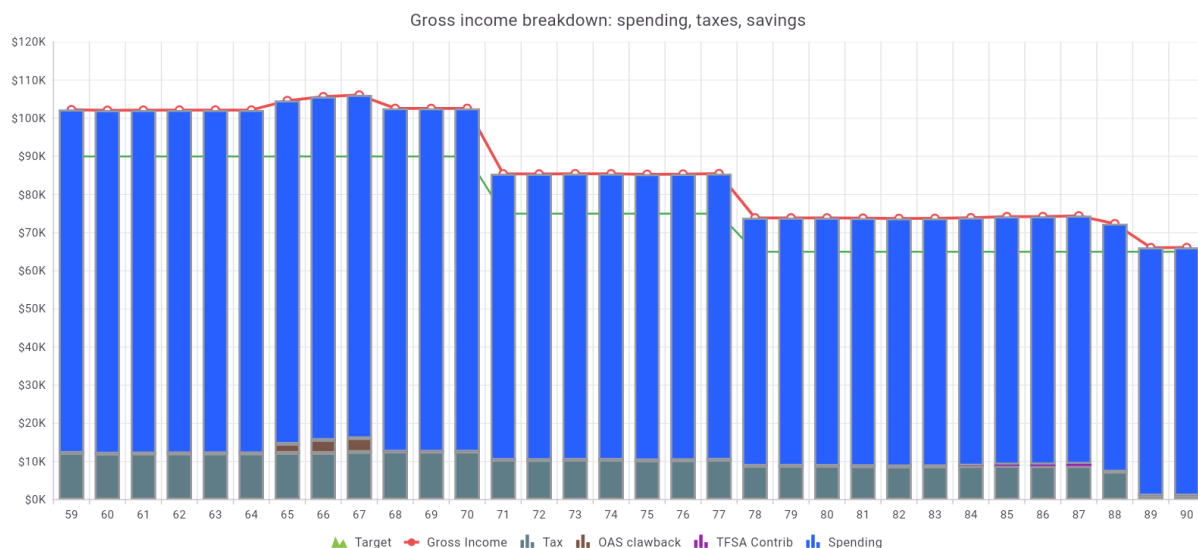
Your required income is achievable!

Max annual after tax income:	\$130,000
Min annual after tax income:	\$130,000
Average annual after tax income:	\$130,000
Combined remained TFSA amount:	\$260,843
Remained joined unreg amount:	\$0
Combined Dividends collected:	\$27,706
Remained RRSP amount(you):	\$164,378
Remained RRSP/RRIF amount(spouse):	\$194,766
Total CPP collected(you)	\$500,700
Total CPP collected(spouse):	\$453,036
Total OAS collected(you):	\$268,992
Total OAS collected(spouse):	\$242,808
Total Additional income(you):	\$0
Total Additional income(spouse):	\$950,000

Total Tax paid(you):	\$198,311
Total Tax paid(spouse):	\$532,369
Max combined effective tax rate:	28.62%
Max combined marginal tax rate:	35.29%
Total OAS clawback(you):	\$0
Total OAS clawback(spouse):	\$0
Capital Loss Carryover:	\$0
Compound price return (adjusted to inflation, simulation):	11.24%
Compound total return (adjusted to inflation, simulation):	50.38%
Total Estate amount:	\$619,987
After Tax Estate amount:	\$509,325
Estate Tax:	\$110,662
Estate tax rate:	17.85%

9.8 Detailed Annual Charts

- **Context:** Appear after 'Calculate' OR when viewing a specific percentile outcome after 'Simulate'. These charts provide the year-by-year breakdown for the single scenario being viewed.
- **Description:** A series of charts detailing annual financial flows for the specific scenario:
 - **Gross Income Breakdown: Spending, Taxes, Savings:**
 - **Purpose:** This chart visualizes the total *pre-tax* income (Gross Income line) required each year to meet your after-tax spending target (Target line) and how that gross amount is allocated.
 - **Format:** Typically a stacked bar chart combined with lines.
 - **Components:**
 - **Spending (Blue Bar):** Represents the actual net, after-tax income available for spending, which should generally align with your 'Required Annual Income' target.
 - **Tax (Grey Bar Segment):** Shows the portion of the gross income estimated to go towards income taxes.
 - **OAS Clawback (Brownish Bar Segment):** Shows the portion of income effectively lost due to OAS clawback, if any.
 - **TFSA Contrib (Purple Bar Segment):** Shows amounts potentially withdrawn from RRSP/Unreg above spending needs that are contributed to a TFSA (if the 'Fund TFSA' option is enabled).
 - **Gross Income (Red Line):** Represents the total pre-tax income/withdrawals generated or needed in the year.
 - **Target (Green Line):** Represents your 'Required Annual Income' (after-tax) target for comparison.
 - **Usefulness:** Helps understand the total pre-tax funds needed each year and the significant impact of taxes and potential clawbacks on your required withdrawals.



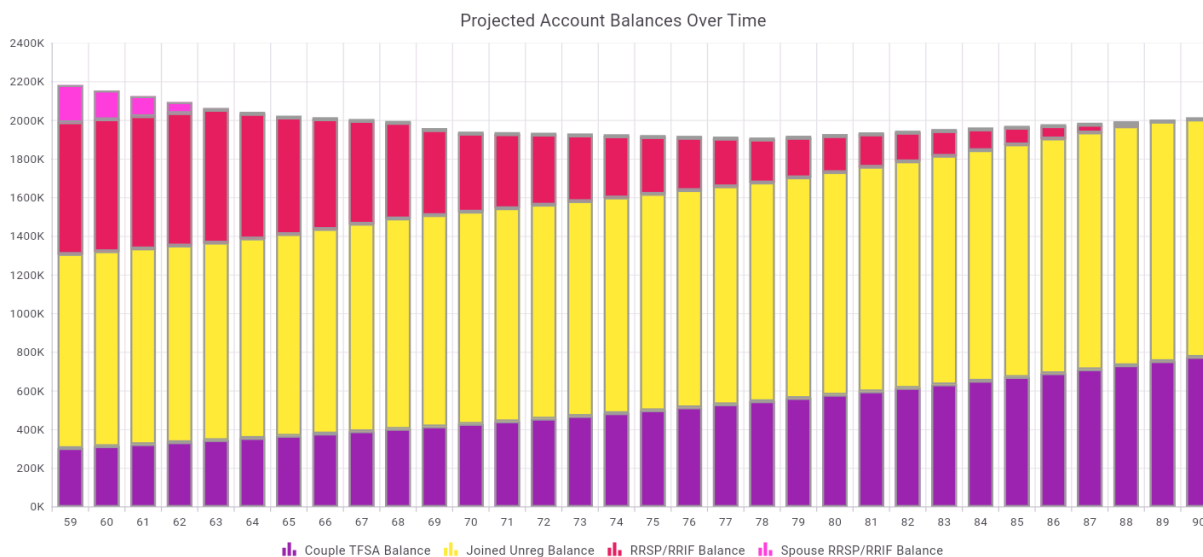
Income Sources:

- **Purpose:** Shows the composition of your *net* income each year, breaking it down by source.
- **Components:** Displays contributions from CPP, OAS, RRSP/RRIF withdrawals, TFSA withdrawals, Unregistered withdrawals, and any Additional Income sources.
- **Usefulness:** Helps visualize reliance on different income streams over time.



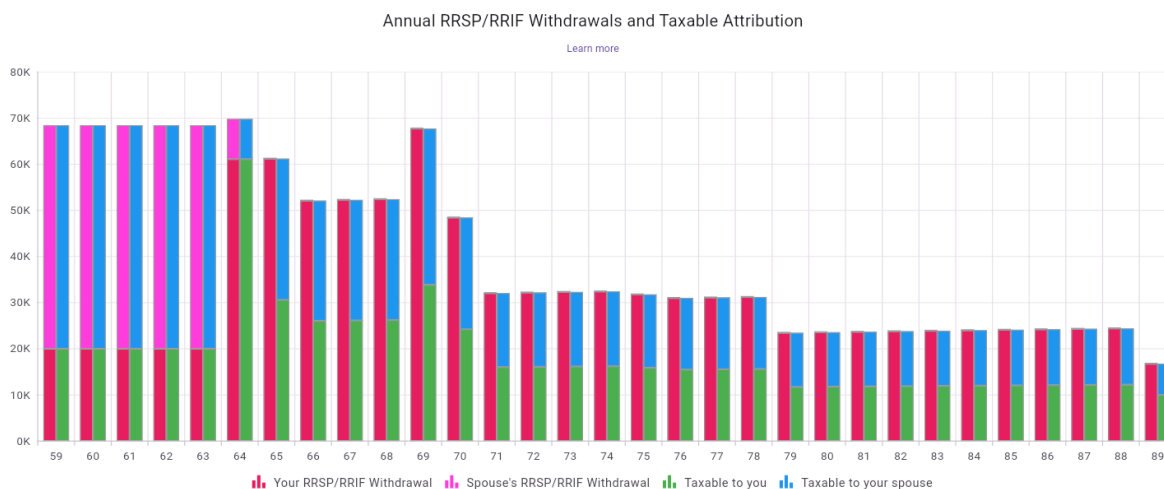
○ **Account Balances over time:**

- *Purpose:* Displays the year-end value of your assets, categorized by account type.
- *Components:* Shows bars representing TFSA, RRSP/RRIF, and Unregistered account balances.
- *Usefulness:* Visualizes asset growth or depletion annually for this specific scenario.



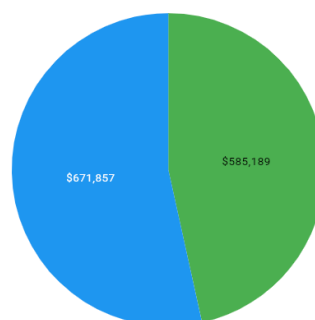
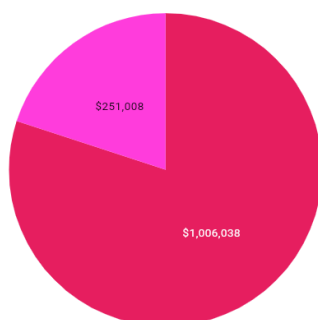
○ **(Couple Plans) Annual RRSP/RRIF Withdrawals and Taxable Attribution::**

- **Purpose:** This stacked bar chart appears for couple plans and details the annual RRSP/RRIF withdrawal activity and its tax implications for the specific scenario being viewed.
- **Usefulness:** This visualization makes it easy to see the total amount withdrawn from RRSPs/RRIFs each year and, crucially, demonstrates the effect of strategies like RRIF income splitting (often occurring after age 65), where withdrawals from one spouse's account might be partially taxed in the other spouse's hands to optimize the overall tax burden.



Total RRSP/RRIF Withdrawals and Taxation Summary

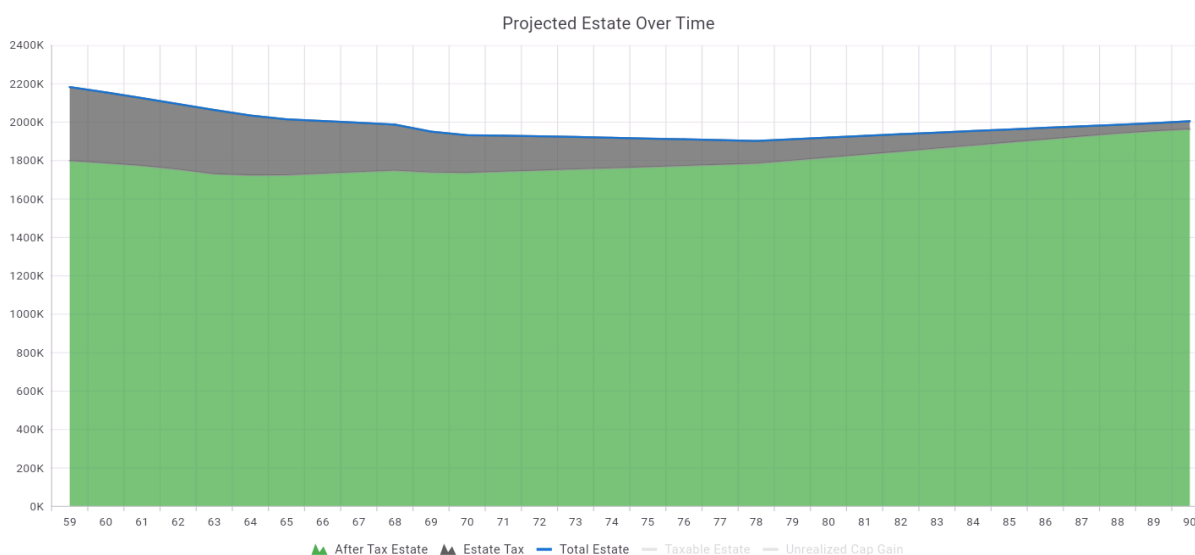
[Learn more](#)



The overall lifetime totals represented in this annual bar chart are summarized visually in the 'Total RRSP/RRIF Withdrawals and Taxation Summary' pie charts typically displayed directly below it.

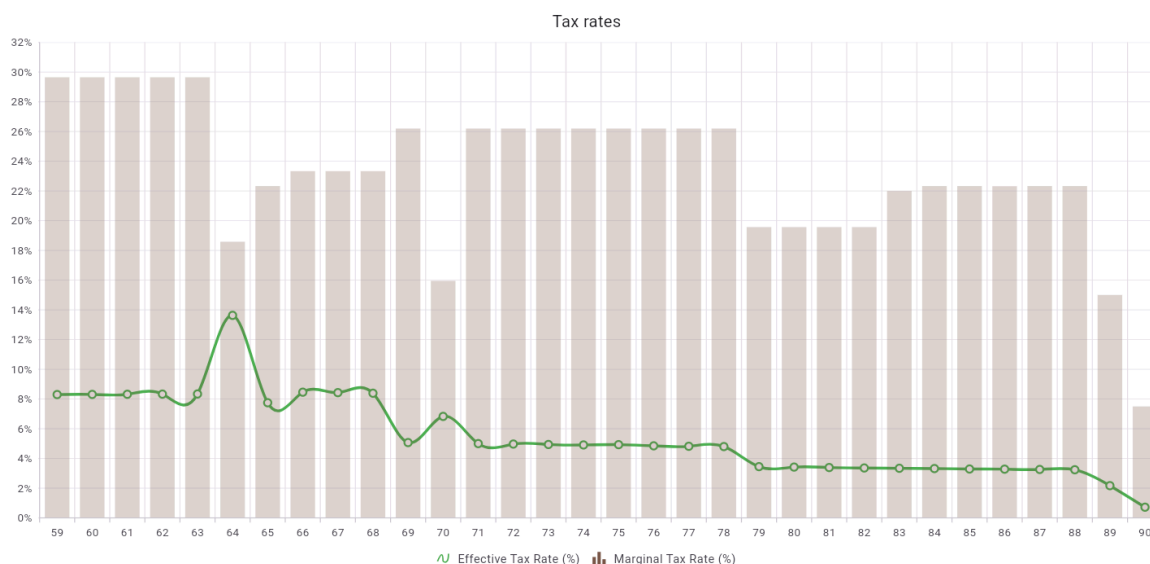
- **Projected Estate Over Time:**

- *Purpose:* This chart visualizes how the estimated value of your total estate might change year by year throughout the retirement plan *for the specific scenario being viewed* ('Calculate' outcome or selected 'Simulate' percentile).
- *Format:* Typically an area chart showing different layers of value.
- *Components:*
 - **Total Estate (Line):** Represents the total projected value of all assets before any potential estate taxes are calculated.
 - **After Tax Estate (e.g., Green Area):** Shows the estimated net value of the estate after accounting for projected taxes payable upon death (like taxes on RRSP/RRIF balances and capital gains on unregistered assets due to deemed disposition). This represents the value potentially transferable to beneficiaries.
 - **Estate Tax (e.g., Grey Area):** Represents the estimated amount of tax that would be payable by the estate in each year, typically showing a significant amount in the final year(s) due to deemed disposition rules.
- *Usefulness:* Helps track the potential growth or decline of your net worth throughout retirement and highlights the potential impact of taxes on the final value of your estate within this specific projected scenario.



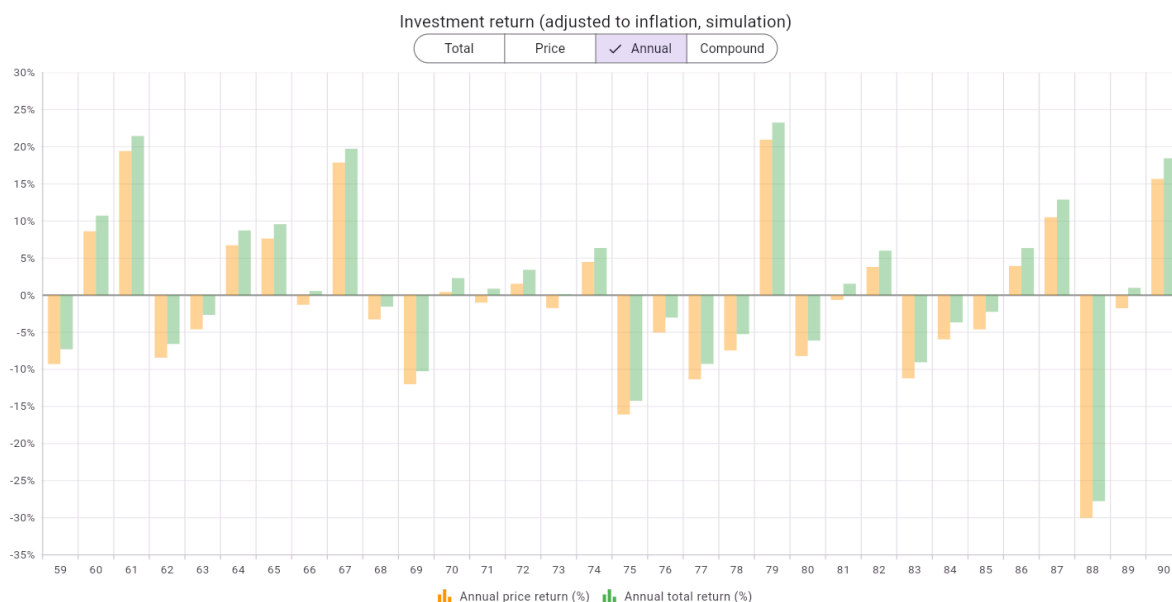
- **Tax Rates:**

- *Purpose:* This chart displays the projected effective (average) and marginal tax rates on an annual basis *for the specific scenario being viewed* ('Calculate' outcome or selected 'Simulate' percentile).
- *Format:* Typically a combination chart showing bars and a line overlaid against a percentage scale.
- *Components:* Key elements usually include:
 - **Effective Tax Rate (%)** (e.g., Green Line): Represents the average tax rate for each year, calculated as total income taxes paid divided by total taxable income.
 - **Marginal Tax Rate (%)** (e.g., Grey Bars): Represents the tax rate that would apply to the next dollar of income earned in that year, indicating the highest tax bracket reached.
- *Usefulness:* Helps visualize your tax situation year by year within this projection. You can see how the average tax burden compares to the top tax rate you reach and observe how factors like income changes (e.g., starting CPP/OAS, large RRSP withdrawals) or tax planning strategies might affect your tax rates over time.



- **Investment Return:**

- **Context:** This chart typically displays the variable annual returns experienced within a specific percentile outcome after running 'Simulate'. While a similar section might appear after 'Calculate', it would likely show flat bars representing the fixed average return assumption used, rather than the year-to-year fluctuations shown when viewing a simulation result. The title often indicates if returns are inflation-adjusted and whether the view is annual or compound.
- **Purpose:** To visualize the annual, inflation-adjusted investment performance (both price changes and total returns including dividends) year by year *for the specific scenario being viewed*.
- **Format:** A bar chart displaying positive and negative percentage returns annually. May include filter buttons (e.g., "Annual", "Price", "Total", "Compound") to change the data displayed.
- **Components:** When viewing annual returns, it typically shows:
 - Annual price return (%) (e.g., Lighter bars): Represents the real (inflation-adjusted) capital appreciation or depreciation for that specific year in this scenario.
 - Annual total return (%) (e.g., Darker bars): Represents the real (inflation-adjusted) total return, including both price changes and dividends, for that specific year in this scenario.
- **Usefulness:** This chart is key to understanding the specific sequence of returns that occurred within this particular simulation percentile. It highlights the year-to-year volatility assumed by the model and visually demonstrates the "sequence of return risk" – how the timing of good versus bad investment years impacts the overall retirement outcome in this specific projection.



9.9 Returns Distribution Chart (Simulate Only)

- Context: Appears only after running 'Simulate'.
- Description: This histogram shows the distribution (frequency) of different annual 'Price Returns' and 'Total Returns' (price + dividends) that occurred across all 1,000 simulated scenarios. It helps you visualize the range of potential investment returns and the likelihood of experiencing different return levels based on the simulation's volatility assumptions.



9.10 Confidence Level Slider (Simulate Only)

- Context: Appears only after running 'Simulate'.
- Description: This interactive slider allows you to select a specific percentile outcome (from 1% to 99%, typically) from the simulation results. Moving the slider updates the Summary & Achievability boxes (9.4), the Detailed Annual Charts (9.5), the Final Summary Statistics (9.6), the Withdrawal Strategies Evaluation (9.9), and the Table Projections (9.11) to reflect the financial path associated with that chosen percentile (e.g., selecting 80% shows a scenario where 80% of simulations performed equally or better).



9.11 Withdrawal Strategies Evaluation Results

- Context: Appears after running 'Calculate' OR after running 'Simulate' *and* selecting a specific outcome via the Confidence Level slider.
- Description: This table compares how various pre-defined RRSP withdrawal strategies would have performed based on the *specific sequence of market returns* being viewed (either the fixed returns from 'Calculate' or the variable returns from the selected 'Simulate' percentile). It shows key outcomes (like Avg Net Income, Net Estate, RRSP Depletion Age) for each strategy under those conditions. Clicking the 'View/Apply' (►) icon next to a strategy updates the detailed charts (9.5) and table (9.11) to show the year-by-year impact of applying that alternative strategy to the current scenario's market returns.

Withdrawal Strategies Evaluation results

[Learn more](#)

Meltdown	Target Tax Rate	RRSP W/D Rate	Avoid Clawback	Bridge CPP/OAS	View/Apply	Avg Net Income	Net Estate	RRSP Balance	RRSP Depleted Age
No	-	50%	No	No	►	\$115,125	\$774,844	\$55,344	-
No	-	50%	Yes	No	►	\$115,125	\$774,844	\$55,344	-
Yes	5%	-	No	-	►	\$115,125	\$768,772	\$10,068	-
Yes	5%	-	Yes	-	►	\$115,125	\$768,772	\$10,068	-
No	-	40%	No	Yes	►	\$115,125	\$764,004	\$61,642	-
No	-	40%	Yes	Yes	►	\$115,125	\$764,004	\$61,642	-
No	-	40%	No	No	►	\$115,125	\$762,959	\$154,948	-
No	-	40%	Yes	No	►	\$115,125	\$762,959	\$154,948	-
No	-	20%	No	Yes	►	\$115,125	\$762,666	\$139,557	-
No	-	20%	Yes	Yes	►	\$115,125	\$762,666	\$139,557	-
No	-	30%	No	Yes	►	\$115,125	\$761,848	\$119,294	-
No	-	30%	Yes	Yes	►	\$115,125	\$761,848	\$119,294	-
Yes	4%	-	No	-	►	\$115,125	\$760,498	\$134,723	-

9.12 Details annual Retirement Financial Projections

- Context: Available after running 'Calculate' OR 'Simulate'. Displays data for the single scenario being viewed (either the 'Calculate' outcome or the 'Simulate' percentile selected via the slider, potentially updated by the Strategies Evaluation).
- Description: This table provides the detailed, year-by-year numerical data behind all the charts and summaries for the currently displayed scenario. It includes columns for ages, income components, withdrawal amounts by source, account balances, taxes, clawback, tax rates, investment returns, etc. It also offers a button to download the data as an Excel file for offline analysis.

Worksheet: Retirement Income Summary (2024-2030)																					
Age		Benefits And Extra Incomes						Withdrawals						Account Balances					Income		
You	Spouse	Your CPP	Spouse's CPP	Your OAS	Spouse's OAS	Your Extra Income	Spouse's Extra Income	Your RRSP/RRIF	Spouse's RRSP/RRIF	RRIF Shared	TFSA	Unregistered	Unreg Dividends	Your RRSP/RRIF	Spouse's RRSP/RRIF	TFSA	Unregistered	Gross Income	Target Net Income	Net Income	
59	58	\$0	\$0	\$0	\$0	\$45,000	\$9,000	\$20,000	\$48,454	\$0	\$0	\$8,037	\$20,800	\$611,912	\$172,953	\$273,506	\$899,948	\$150,491	\$134,000 - \$138,000	\$138,000	
60	59	\$0	\$0	\$0	\$0	\$45,000	\$9,000	\$18,000	\$47,617	\$0	\$0	\$7,121	\$18,918	\$657,554	\$138,767	\$302,814	\$969,620	\$145,656	\$134,000 - \$138,000	\$134,000	
61	60	\$0	\$0	\$0	\$0	\$45,000	\$9,000	\$21,000	\$47,458	\$0	\$0	\$8,460	\$19,576	\$773,107	\$110,896	\$367,774	\$1,147,842	\$150,494	\$134,000 - \$138,000	\$138,000	
62	61	\$0	\$0	\$0	\$0	\$45,000	\$9,000	\$20,000	\$48,449	\$0	\$0	\$6,773	\$21,290	\$703,578	\$58,340	\$343,586	\$1,044,952	\$150,512	\$134,000 - \$138,000	\$138,000	
63	62	\$0	\$0	\$0	\$0	\$45,000	\$9,000	\$20,000	\$48,453	\$0	\$0	\$7,853	\$20,272	\$665,392	\$9,623	\$334,446	\$989,387	\$150,578	\$134,000 - \$138,000	\$138,000	
64	63	\$0	\$0	\$0	\$0	\$45,000	\$9,000	\$59,663	\$9,623	\$0	\$0	\$2,388	\$19,658	\$658,524	\$0	\$363,596	\$1,053,415	\$145,332	\$122,000 - \$126,000	\$126,000	
65	64	\$0	\$0	\$0	\$0	\$45,000	\$9,000	\$61,214	\$0	\$30,607	\$0	\$1,106	\$20,270	\$654,449	\$0	\$398,378	\$1,132,724	\$136,590	\$122,000 - \$126,000	\$126,000	
66	65	\$0	\$0	\$0	\$0	\$60,000	\$9,000	\$52,137	\$0	\$26,068	\$0	\$0	\$16,528	\$605,697	\$0	\$400,617	\$1,120,315	\$137,665	\$122,000 - \$126,000	\$126,000	
67	66	\$0	\$0	\$0	\$0	\$59,700	\$9,000	\$52,301	\$0	\$26,150	\$0	\$0	\$16,606	\$662,603	\$0	\$479,676	\$1,322,630	\$137,607	\$122,000 - \$126,000	\$126,000	
68	67	\$0	\$0	\$0	\$0	\$59,406	\$9,000	\$52,483	\$0	\$26,241	\$0	\$0	\$16,690	\$600,733	\$0	\$472,296	\$1,282,519	\$137,579	\$122,000 - \$126,000	\$126,000	
69	68	\$0	\$0	\$0	\$0	\$14,118	\$9,000	\$67,850	\$0	\$33,925	\$0	\$6,792	\$22,516	\$478,278	\$0	\$423,899	\$1,122,604	\$120,276	\$110,000 - \$114,000	\$114,000	
70	69	\$13,632	\$0	\$8,160	\$0	\$13,836	\$9,000	\$48,458	\$0	\$24,229	\$0	\$8,292	\$21,852	\$439,708	\$0	\$433,652	\$1,119,111	\$122,370	\$110,000 - \$114,000	\$114,000	
71	70	\$9,798	\$9,798	\$8,160	\$8,160	\$13,559	\$9,000	\$32,111	\$0	\$16,055	\$0	\$8,510	\$20,942	\$411,138	\$0	\$437,420	\$1,099,466	\$120,038	\$110,000 - \$114,000	\$114,000	

Got it. Thanks for providing the Dart code (`appbar_dart.txt`)! This gives us the precise tooltips and confirms the function of each icon in the app bar shown in `image_7167a7.png`.

Here is the updated description for **Section 10: Function Bar Options**, incorporating the accurate information from the code:

10. Application Bar Commands

- **Context:** A function bar containing several icons is usually available on the screen, often positioned near the top right as part of the application's AppBar.
- **Purpose:** This bar provides quick access to various actions for navigating, managing your plan files, exporting results, or finding help and information.



- Scrolls the page view to the top.
- Loads previously saved retirement parameters from a file.
- Saves your current retirement parameters to a file.
- Saves the current retirement calculator screen (screenshot) to a file.
- Saves the current retirement report to a PDF file.
- Submit your feedback, question or feature suggestion to MayRetire support
- Opens the MayRetire Facebook page.
- Displays information about the MayRetire application.

11. Disclaimer

MayRetire.com is a financial planning tool for informational and illustrative purposes only. The projections are based on the inputs and assumptions you provide and the inherent randomness of the Monte Carlo simulation (if used). It does not constitute financial, investment, legal, or tax advice. Future market performance, inflation, tax laws, and personal circumstances may differ from the assumptions used. Consult with qualified professionals before making any financial decisions.