

RETIREMENT PROJECTION SUMMARY

Prepared for: Sample Client

WHAT THIS PLAN SUPPORTS

ANNUAL SPENDING

\$55,000

5.50% of \$1,000,000 at retirement

SPENDING GUARDRAILS

If the portfolio rises to \$1,250,000
raise to \$60,500/yr

If the portfolio falls to \$833,333
trim to \$49,500/yr

Guardrail levels are Guyton-Klinger bands (±20% of the initial withdrawal rate) computed from this plan. Figures are in today's dollars.
The rate below is the no-adjustment case — the simulation holds spending flat in real terms and does not model these guardrails.

KEY METRICS

Survived, no adjustments

99.8%

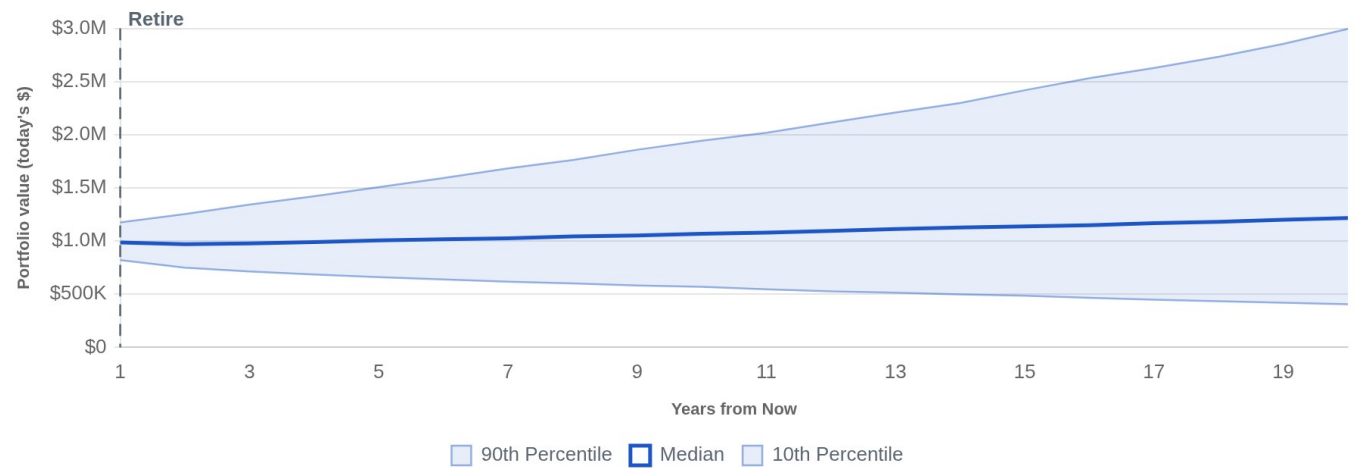
Median ending balance

\$1,216,723

10th percentile ending balance

\$406,397

PORTFOLIO PROJECTION (today's dollars)



IMPORTANT DISCLOSURE: This report is for educational and informational purposes only and does not constitute financial, investment, tax, or legal advice. Monte Carlo simulations are based on mathematical models using assumed or projected market returns and volatility. Actual market conditions may differ materially. Past performance does not guarantee future results. Consult a qualified financial professional before making investment or retirement planning decisions.

PLAN DETAILS & ANALYSIS

ASSUMPTIONS

Current Age: 65	Retire At: 65	Plan Until: 85
Savings: \$1,000,000	Contributions: \$0/mo	Spending: \$55,000/yr
Social Security: \$28,000/yr from 67	Pension: \$0/yr	Inflation: 2.5%
Accounts: traditional \$400,000 · Roth \$300,000 · taxable \$300,000		
Filing status: SINGLE · State tax: CO		
Simulations: 10,000	Withdrawal rule: Fixed real spending	

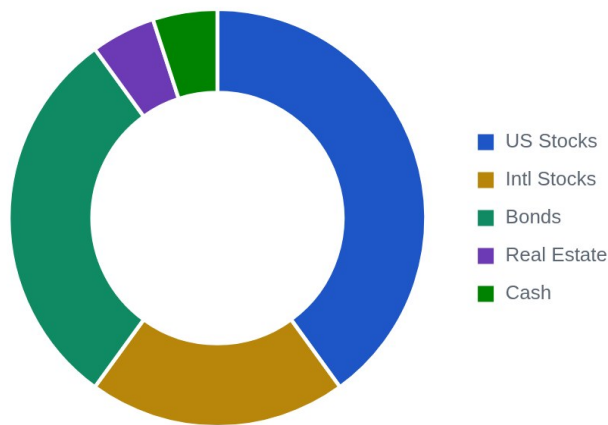
ASSET ALLOCATION

US Stocks 40% | Intl Stocks 20% | Bonds 30% | Real Estate 5% | Cash 5%

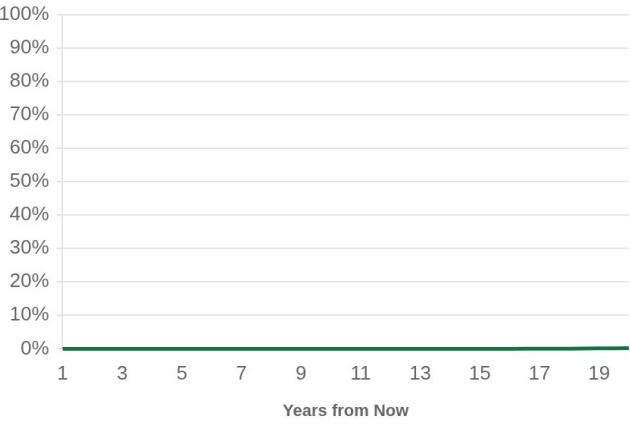
MARKET ASSUMPTIONS

Returns: JPMorgan LTCMA 2026 | Correlations: JPMorgan LTCMA 2026 | Volatility: Historical 1926-2025
Sampler: Sobol quasi-Monte Carlo

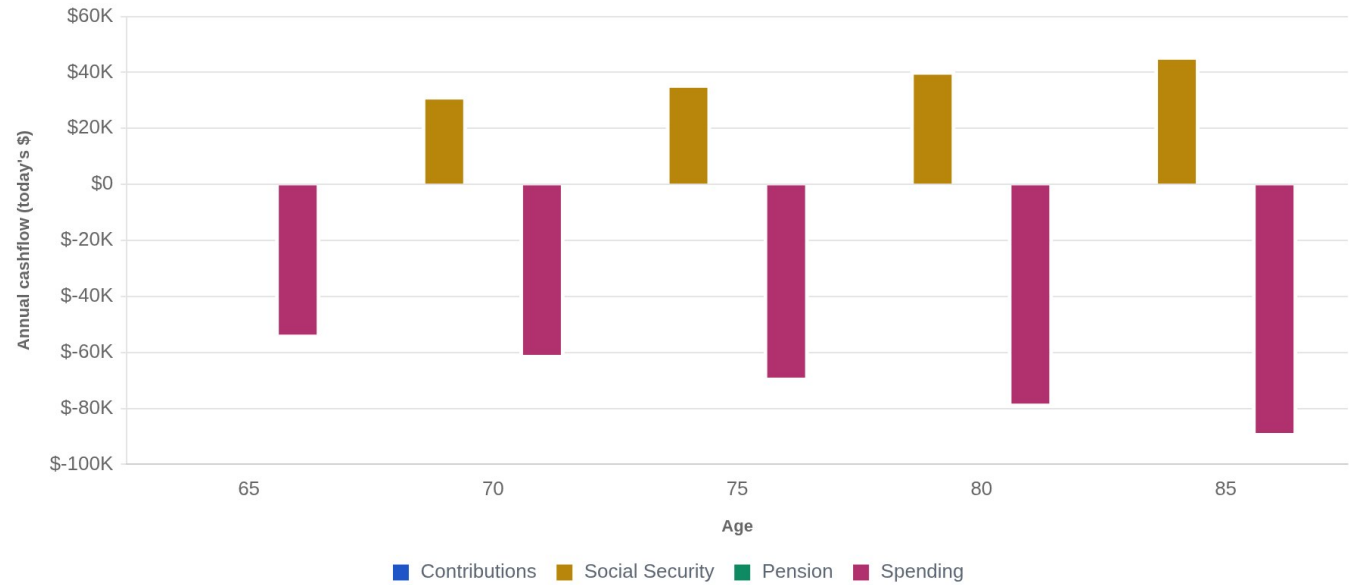
ALLOCATION CHART



PROBABILITY OF RUIN



ANNUAL CASH FLOW



TAX-AWARE WITHDRAWAL ORDER

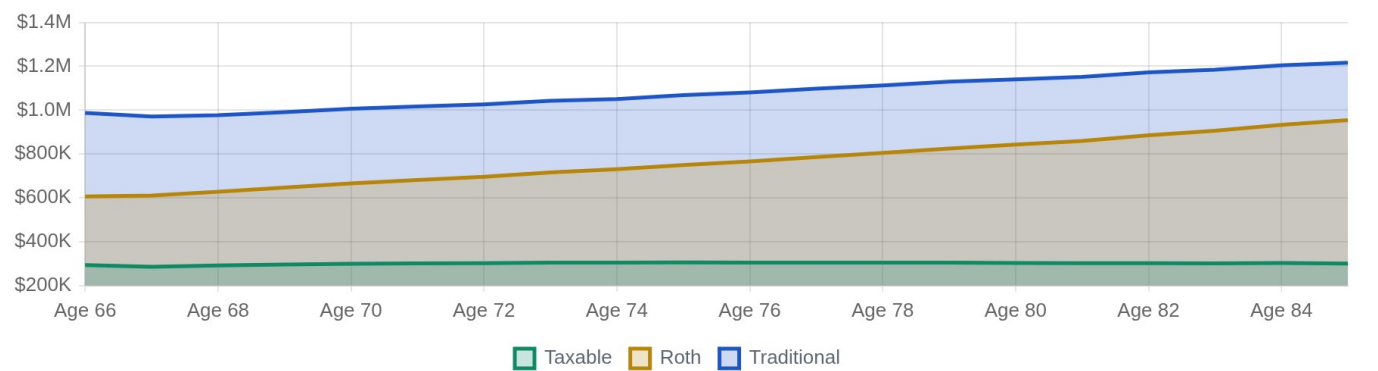
TAX IMPACT SUMMARY

Recommended order	Traditional-first	Advantage of the recommended order (present value)
\$34K	\$59K	\$13K

Recommended order: Traditional to the top of the 10% bracket each year, then taxable, then Roth. It was chosen from a set of whole-retirement policies (withdrawal orders, and Roth-conversion rules unless a plan was entered), simulated on the same market paths, as the one with the lowest present value of lifetime tax and unfunded spending (spending is after tax: each year's withdrawal covers spending plus that year's bill, paid from the accounts drawn; federal, state, Medicare surcharges and penalties, each year discounted at the portfolio's own return, plus tax still owed on any traditional balance left at the end, valued at an heir's single-filer rate over ten years). The two lifetime-tax figures are medians of tax paid in today's dollars; the saving is the median per-path present-value difference against drawing traditional first, which is itself one of the candidates, so it is never below zero.

Tax still owed: \$15K recommended vs \$0 traditional-first, valued at an heir's single-filer rate over ten years (today's dollars) and included in the saving above, not the two lifetime-tax boxes.

ACCOUNT DEPLETION OVER TIME



ANNUAL TAX BURDEN



WHAT-IF COMPARISONS

Each row is a full simulation of this plan at the same path count; only the named inputs differ.

Scenarios

Scenario	Inputs	Survival	Median end	10th pct end
Current plan	retire 65 · \$55,000/yr · SS 67	99.8%	\$1,216,723	\$406,397
Spend \$60,000	retire 65 · \$60,000/yr · SS 67	99.1%	\$1,056,280	\$293,185
Spend \$50,000	retire 65 · \$50,000/yr · SS 67	100.0%	\$1,372,684	\$518,424

"Current plan" is the run this report is built on. Each scenario is a saved set of inputs re-run in full; the Inputs column lists the headline settings (retirement age, spending, Social Security claim age, withdrawal rule).

METHODOLOGY & ASSUMPTIONS

How the figures in this report were produced — for the planning file.

1. Simulation engine

Monte Carlo simulation of the portfolio in monthly steps from age 65 to age 85, 10,000 independent trials. Each month's asset returns are drawn from correlated log-normal distributions; the correlation structure is imposed by Cholesky decomposition of the source correlation matrix. The portfolio return is the target-weighted average of asset returns, so target weights are maintained throughout.

- Sampling: Sobol quasi-Monte Carlo — low-discrepancy sequences that converge faster than pseudo-random draws at the same trial count.

2. Return assumptions

Expected returns: JPMorgan LTCMA 2026. Volatilities: Historical 1926-2025. Correlation matrix: JPMorgan LTCMA 2026. Return and inflation assumptions are nominal annual figures converted to monthly log-normal parameters; results are then expressed in today's dollars.

Asset class	Expected return (nominal, annual)	Volatility (annual)
US Stocks	6.7%	19.5%
Intl Stocks	7.4%	22.0%
Bonds	4.8%	7.5%
Real Estate	6.5%	18.0%
Cash	3.2%	1.5%

3. Inflation

2.5% per year, deterministic. Withdrawals are indexed to inflation and every dollar figure in this report is expressed in today's purchasing power.

4. Withdrawal rule

Fixed real spending. The planned amount is funded every year (in Tax-Aware Mode, plus that year's taxes), indexed to inflation, regardless of portfolio performance. The survival rate is the share of trials in which the portfolio never reached zero before the plan horizon.

5. Cash flows

- No further contributions — the client is already drawing down.
- Spending: \$55,000 per year in today's dollars from age 65, after income tax.
- Social Security: \$28,000 per year from age 67.

6. Asset allocation

US Stocks 40%, Intl Stocks 20%, Bonds 30%, Real Estate 5%, Cash 5% — held at target throughout the plan.

7. Limitations

- Longevity is a fixed horizon (age 85), not a mortality distribution.
- Taxes: Tax-Aware Mode was used. Spending is after income tax: each year's withdrawal covered spending plus that year's federal, state and Medicare-surcharge bill, paid from the accounts drawn; the withdrawal order and lifetime tax figures on the tax page were computed under the withdrawal rule in section 4.
- Return assumptions are inputs from the named sources, not forecasts by the software; uncertainty in those assumptions is not itself simulated.
- Results are hypothetical and do not guarantee outcomes.
- Results may vary with each use and over time as inputs, return assumptions and tax law change.
- The universe considered is the plan's own asset classes at the named return sources; investments not considered may have characteristics similar or superior to those analysed.

8. References

Engine documentation: quantcalc.app/methodology.html. Withdrawal-rule research: quantcalc.app/research/dynamic-vs-static-withdrawal-strategies/.