# RETIREMENT SPENDING ANALYSIS

Report Prepared for:

## JOHNNY SAMPLE

This analysis is provided courtesy of


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Financial Planning Hawaii provides comprehensive, highly personalized financial planning and investment management guidance to individual families. The foundation of our practice is an application that enables clients to centralize, organize, monitor, and maintain all aspects of their financial lives. If you think financial planning is just about investing, think again.

# RETIREMENT SPENDING ANALYSIS INPUTS

## YOUR BASIC DATA

| | |
|---|---|
| Years in retirement: | 30 |
| Current retirement nest egg value: | $1,000,000 |
| Initial withdrawal amount: | $40,000 |
| Annual cost of living adjustment: | 3% |

Planned Increases/Decreases to withdrawal amount beyond inflation adjustments:

- (●) No planned future adjustments to withdrawal amount.
- ( ) Allow for one future adjustment to my withdrawal amount illustration .
- ( ) Allow for two future adjustments to my withdrawal amount.

## RETIREMENT SPENDING PORTFOLIO DETAILS

**Broad Asset Allocation**

| | |
|---|---|
| 60% | Stocks |
| 30% | Bonds |
| 10% | Cash |

**Detailed Stock Allocation**

| | |
|---|---|
| 45% | Large U.S. Stocks |
| 30% | Mid & Small U.S. Stocks |
| 25% | Foreign Stocks |

| | |
|---|---|
| Expected rate of return on bonds: | 2% |
| Expected rate of return on cash: | 0% |
| Total expected investment expenses: | 1% |

## RETIREMENT WITHDRAWAL STRATEGY

- (●) Constant Allocation with Annual Rebalancing - proportional withdrawal from each asset class
- ( ) Stocks First Glidepath – Spend down the stocks first, then bonds, then cash.
- ( ) Bonds/Cash First Glidepath – Spend down cash first, then bonds, then stocks.
- ( ) Guardrail Strategy – Do not spend down stocks following negative return years

# RETIREMENT SPENDING ANALYSIS RESULTS

## UNDERSTANDING THE RETIREMENT SPENDING APP RESULTS

Instead of focusing on probabilities of success as many financial planning apps do, we believe it is more instructive to present users with a full range of simulation results representing a broad spectrum of potential economic conditions. In keeping with the basic financial planning philosophy of "hope for the best, but prepare for the worst", users are encouraged to evaluate their preparedness by focusing on the bottom half of the simulation results (median-worst). In particular, the 1%, 5%, and 10% results may be considered the most valuable statistics for assessing the risk of each illustrated input scenario.

Presenting the remaining balance data in five year increments over the illustrated retirement time horizon is intended to enable users to quantify their risk of running out of money in a way that a single probability percentage cannot. Similarly, the inclusion of remaining balance data may allow users to tangibly quantify and balance the tradeoff between their planned annual withdrawal amount and the remaining balance that may be left for heirs. This is an important concept because it helps users see and understand how focusing too much on establishing a "safe withdrawal rate" (i.e., an inflation-adjusted withdrawal rate that will assure sustainability) may lead to a lower standard of living in retirement and too much money left on the table for heirs.

## RETIREMENT SPENDING ANALYSIS RESULTS SUMMARY

Out of 5,000 withdrawal simulations, your **30 years** withdrawal goal was successful this % of the time:

71%

This is the percentage of simulations in which your Nest Egg lasted longer than you did.

At the top 20% result (80th percentile) of the 5,000 simulations, your remaining portfolio balance at the end of **30 years** was:

$2,377,795

This may represent an overly optimistic outcome

Out of 5,000 simulations, your retirement nest egg was depleted before **30 years** this percent of the time:

29%

This percentage represents the failure rate of the 5,000 simulations.

At the worst result out of the 5,000 simulations, your remaining portfolio balance at the end of **30 years** was

$0

This result may represent investment conditions that are worse than any in the historical record.

## COMPLETE RETIREMENT NEST EGG SUSTAINABILITY SIMULATION RESULTS

The median remaining balance results represent the the 2,500th best/worst simulation result of the 5,000 total simulations for each 5 year interval. The 10%, 5%, and 1% remaining balances represent the bottom 500th, 250th, and 50th simulation results, respectively. It is important to understand that the percentages do not represent probabilities and are not intended to be predictive. Instead, the simulation results illustrate how your nest egg may fare in retirement if things go badly in the markets.

### Remaining Nest Egg Balance in 5 year Intervals

| Simulation Percentile | After 5 Years | After 10 Years | After 15 Years | After 20 Years | After 25 Years | After 30 Years |
|---|---|---|---|---|---|---|
| 80% | $1,292,873 | $1,520,589 | $1,762,618 | $1,982,829 | $2,180,136 | $2,377,795 |
| 60% | $1,140,253 | $1,223,896 | $1,285,950 | $1,303,699 | $1,263,328 | $1,123,305 |
| Median | $1,074,499 | $1,112,229 | $1,123,685 | $1,076,572 | $965,064 | $716,209 |
| 40% | $1,012,029 | $1,017,093 | $974,101 | $879,514 | $697,158 | $372,358 |
| 20% | $880,666 | $803,548 | $687,307 | $493,403 | $197,269 | $0 |
| 10% | $791,861 | $675,844 | $515,045 | $264,007 | $0 | $0 |
| 5% | $729,881 | $583,289 | $401,322 | $109,932 | $0 | $0 |
| 1% | $623,374 | $438,900 | $201,017 | $0 | $0 | $0 |
| Worst | $492,580 | $210,411 | $0 | $0 | $0 | $0 |

## IMPORTANT DISCLOSURES:

The simulation results produced by this application are hypothetical in nature, do not reflect actual investment results, and provide no assurance of future returns. Instead, the application is intended as an educational tool to help users generally assess their planning preparedness and to help them understand how changing the various inputs that are within their control may impact the results. While we believe the information presented may be instructive in helping users plan for their financial goals, it is important to understand that no application is a crystal ball and that the apps are not intended to predict future returns.

Similarly, it is important to understand the limitations of this or any other planning application. First, while considerable thought has gone into designing portfolio models that realistically represent individual investor experiences, the degree to which the index models used to produce the simulations may differ from the actual users' portfolios may affect the applicability of the results. Second, the choice of indices and the time periods from which the monthly index return data were sampled may have a significant effect on the outcomes and might produce different results if different indices and/or time periods were chosen. Third, because the simulation results are derived from random sampling of historical monthly returns data, there is an underlying assumption that future returns will at least be somewhat similar to what they have been in the recent past. Fourth, users should be aware that, as with all simulation-based applications, results may vary from one simulation to the next and over time. Lastly, while we believe the methodology chosen in this application has certain advantages, other apps using different methodologies may produce different results.

The 5,000 simulation results presented herein were produced using a sampling methodology called "bootstrapping". The simulations were generated from monthly equity index return data from 1970-2016. The S&P 500 Index is employed as the proxy for large cap U.S. Stocks, international stocks are represented by the MSCI EAFE Index, and small and mid-cap stocks are represented by the Russell 2000 Index. The application also holds monthly index data for the Merrill Lynch U.S. Corporate Bond Index, 10-year treasuries, and one year treasuries. However, as noted on the inputs page, the option to include these indices has been intentionally suppressed in the current low interest rate environment.

This application is made available to you as an education tool for your independent use and is not intended as a substitute for professional financial planning guidance or advice. While it is hoped that the app will help you to identify important factors to consider in planning for your financial goals, for specific guidance, users are encouraged to consult with a trusted financial planning professional.