## Fund for a Grandchild

How to create a lasting legacy for your grandchild

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## Opening Remarks

- Reasons for doing this are personal and varied
- Provide supplemental income during retirement
- Provide help in achieving life goals (e.g., home ownership)
- Provide buffer against life's unknowns
- . . .
- The scenario is simplified. It is meant to provide insight into the magnitude of how the decisions one may make will affect the outcome.
- Not meant to provide specific individual guidance on what your plan should be or the performance you will achieve.


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## The Basic Scenario

"The Scenario" is simplified to make it easier to see 'what's important'

- Start with $\$ 10,000$ at age " 0 " in a taxable investment account
- Taxable and Roth accounts grow at constant 12\%/year
- Taxable account withdraws pay taxable account taxes
- Taxable withdraws fund Roth contributions starting at age 21
- Retire at age 65
- Take retirement withdrawals of $5 \%$ of the Roth balance every year
- Plan ends at age 95


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## Modelling Assumptions

## Taxable Account

- Roth contribution withdrawals are taken on the ' 1 st of the year'.
- All dividends are considered as 100\% taxable dividends.
- All withdrawals considered as 100\% capital gains taxable.
- All taxes are paid by withdrawals taken at the 'end of the year'.


## Roth IRA

- Contributions to Roth account are made on the ' 1 st of the year'.
- Retirement withdrawals are taken, tax free, from Roth account once a year on the ' 1 st of the year'.
- Note: No retirement withdrawals are taken from the taxable account, if one exists.


## Fund for a Grandchild

## Analysis Inputs, Scope and Results

- Inputs cover a wide range of considerations
- Yellow shaded parameters represent key decisions to make when setting up and operating the fund
- We will investigate each of these individually
- Blue shaded values represent the baseline scenario results used for comparison

Note: Roth contribution of $\$ 8,000$ is used to represent 'nominal future inflation' in the maximum allowable contribution amount

Strategy Inputs

| Strategy inputs |  | Rate Inputs |  |  |
| :--- | :---: | :---: | :--- | ---: |
| Starting Age | $\mathbf{0}$ |  | Inflation Rate | $\mathbf{3 . 0 \%}$ |
| Starting Amount | $\mathbf{\$ 1 0 , 0 0 0}$ |  | CG Tax Rate | $\mathbf{1 5 . 0 \%}$ |
| Rate of Return | $\mathbf{1 2 . 0 0 \%}$ |  | Dividend Rate | $2.0 \%$ |
| Begin Roth Contrib | 21 |  | Ord Div Tax Rate | $\mathbf{2 4 . 0 \%}$ |
| Roth Contrib | $\mathbf{\$ 8 , 0 0 0}$ |  |  |  |
| Inflate Roth? (Y/N) | $\mathbf{n}$ |  |  |  |
| Roth Catch-Up | $\mathbf{\$}$ | - |  |  |
| End Roth Contrib | $\mathbf{6 4}$ |  |  |  |
| Retirement Age | $\mathbf{6 5}$ |  |  |  |
| Withdrawal Rate | $-5 \%$ |  |  |  |
| End of Plan Age | $\mathbf{9 5}$ |  |  |  |

## Summary of Results

|  |  | minal \$ |  | eal \$ |
| :---: | :---: | :---: | :---: | :---: |
| Retire Balance-Tax | \$ | 1,183,128 | \$ | 173,226 |
| Retire Balance-Roth | \$ | 10,857,840 | \$ | 1,589,732 |
| First Ret. Dist. | \$ | 542,892 | \$ | 79,487 |
| Last Ret. Dist. | \$ | 3,281,109 | \$ | 203,855 |
| Total Retire Distrib. | \$ | 46,065,750 | \$ | 3,971,489 |
| End Balance-Tax | \$ | 31,161,227 | \$ | 1,879,655 |
| End Balance-Roth | \$ | 69,822,000 | \$ | 4,211,686 |
| Total Benefit | \$ | 147,048,977 | \$ | 10,062,830 |
| (* Note: 3\% inflation is assumed to calculate Real \$.) |  |  |  |  |

## Let's look at the results.

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## Options to Achieve Target Return

Sample Portfolio Options

| Target <br> Rate | Asset Allocation |  |  | Historical Return |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | S\&P 500 | US SCV | Bonds | 1927-2022 | 1970-2022 |
| --- | $--\%$ | $100 \%$ | $--\%$ | $13.1 \%$ | $14.7 \%$ |
| $\mathbf{1 2 \%}$ | $50 \%$ | $50 \%$ | $--\%$ | $11.9 \%$ | $12.9 \%$ |
| $\mathbf{1 0 \%}$ | $100 \%$ | $--\%$ | $--\%$ | $10.0 \%$ | $10.5 \%$ |
| $\mathbf{8 \%}$ | $60 \%$ | $--\%$ | $40 \%$ | $8.3 \%$ | $9.1 \%$ |

Notes: Annual rebalancing
Bonds represented by 5-year Treasury Notes
Representative Expense Ratio applied to index returns
Data Source: DFA Returns Web

## CAVEATS

- The scenarios presented here assume a constant Rates of Return - THIS IS NOT REAL.
- The sensitivity studies are meant to show how decisions you may make are related to the ultimate outcome, in a relative, (somewhat) quantitative manner
- Returns from the sample portfolio option asset allocations WILL BE DIFFERENT.


## Best-in-Class Recommendations

|  | Best-in-Class | Alternative Recommendations |
| :--- | :---: | :---: |
| US Large Cap Blend | Avantis U.S. Equity |  |
| (AVUS) | Vanguard S\&P 500 (VOO), Vanguard Total US Market (VTI), |  |
| US Small Cap Value | Avantis U.S. Small Cap Value |  |
| (AVUV) | iShares Core S\&P 500 (IVV), SPDR Large Cap (SPLG), Schwab Large-Cap (SCHX) |  |

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## Round-Table Discussion

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